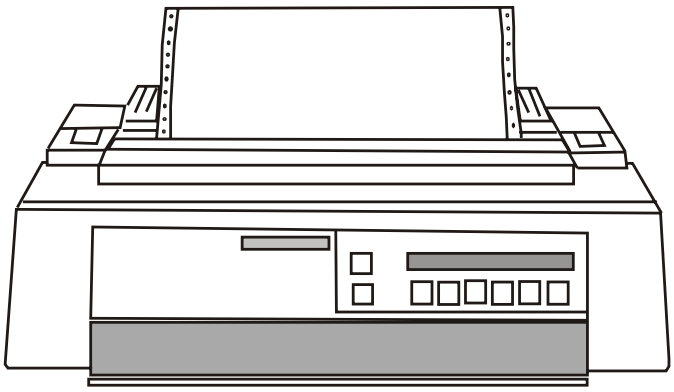
7030

User Manual



Compuprint Information

Thanks *for choosing this printer.*

Your printer is a reliable working equipment that will be very useful in your daily job.

Our printers have been designed to be compact and respectful of the work environment. They offer a wide range of features and multiple functions that confirm the high technological level reached by the Compuprint S.p.A.

To maintain these printing performances unchanged in the long run, Compuprint has developed specific consumable accessories for each printer type (for example: ribbon cartridges for dot matrix printers, toner and OPC cartridges for laser printers, bubble ink jet cartridges for inkjet printers) that assure an excellent operation with high printing quality level reliability.

Compuprint recommends to use only its ***original consumables with original packaging (identified by its holographic label).*** *In this way, a proper use of the printer at quality level unreliability stated in the product characteristics can be assured. All typical usage problems related to not certified consumables may be avoided, such as an overall quality print level degradation and, often, the reduction of the product life due to the fact that the proper print heads working conditions, OPC cartridge and other printer parts are not assured.*

Moreover, Compuprint does not only certify its consumables in terms of working conditions but also carefully controls their compliance with the international standard rules concerning:

- *no cancerous materials;*
- *no inflammability of the plastic materials;*
- *other standards*

Compuprint advises the customers not to use products for which the compliance to this safety rules are not warranted.

Finally seek your dealer or contact a Compuprint office and be sure that are provided you the original Compuprint consumables.

FCC Notice

WARNING: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

In equipment labeled Class A compliant, a shielded and grounded I/O cable is mandatory to achieve compliance with the FCC Rules regarding radio emissions from computers. Please consult your dealer for further details regarding radio emissions from computers. Please consult your dealer for further details regarding such a cable.

Changes or modifications to the devices covered by this manual, which are not expressly approved by the party responsible for compliance could void the user's authority under the FCC Rules to operate the equipment.

Canadian D.O.C. Radio Interference Regulations

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de classe A prescrites dans le réglement sur le brouillage radioélectrique édicté par le ministère des communications du Canada.

EEC Regulations

This equipment conforms to the EEC Directive 89/392 (the sound pressure, measured according to ISO 7779, does not exceed 70 dBA).

Compuprint 7030 - TA Printers

A78402389-001

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Introduction

This section gives you a general presentation of your new printer. It describes the various features of your printer, the environment in which you can work and the physical characteristics of your printer. The second part of the section illustrates each part of your printer. This will help you to learn the various names of the different parts. You can also use this section as a quick reference section during your training with this printer.

Printer Presentation 1.2
General Overview 1.2
Main Features 1.3

Printer Part Identification 1.5

Printer Presentation

General Overview

The wide range of features for your new printer indicates its high technological level.

Your new printer can be connected in a Twinaxial environment and simultaneously to an IBM or compatible PC through a parallel interface.

Your printer is a dot matrix printer which connects to IBM System/36, IBM AS/400, IBM 5294, IBM 5394 and IBM 5494 control units. It is functionally equivalent to the IBM 4224 or 4230 (Printer Twinax models) and to IBM Proprinter III XL and EPSON EX-1000 (Printer ASCII models).

This printer provides different types of printing, formatting flexibility and several paper loading types. You can control the printer with the operator panel or through data-stream commands.

The 7030 printer is available in different models.

Model TA1 offers:

- *Printing speed up to 450 cps at 10 cpi*
- *An 18 needle moving ruby print head*
- *Up to 128 Kbyte memory*
- *Emulation : IBM 4230 Model 101 in Twinax mode and IBM Proprinter III-XL /EPSON EX-1000 in ASCII mode.*

Model TA2 offers:

- *Printing speed up to 450 cps at 10 cpi*
- *An 18 needle moving ruby print head*
- *Up to 512 Kbyte memory*
- *Emulation : IBM 4230 Model 102 and IBM Proprinter III-XL /EPSON EX-1000 in ASCII mode.*

Model TA3 offers:

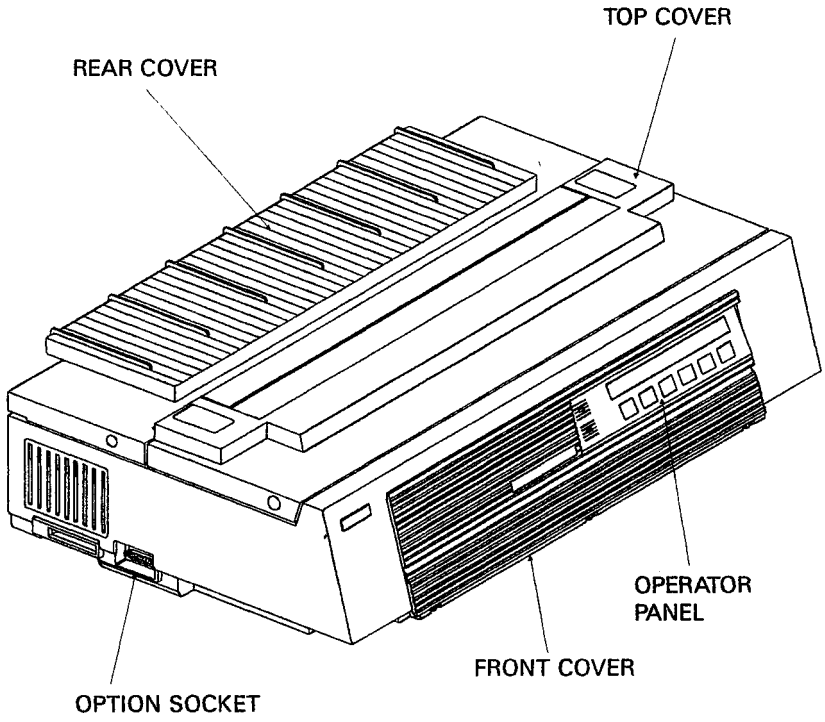
- *Printing speed up to 600 cps at 10 cpi*
- *An 18 needle moving ruby print head*
- *Up to 512 Kbyte memory*
- *Emulation : IBM 4230 Model 102 and IBM Proprinter III-XL /EPSON EX-1000 in ASCII mode.*

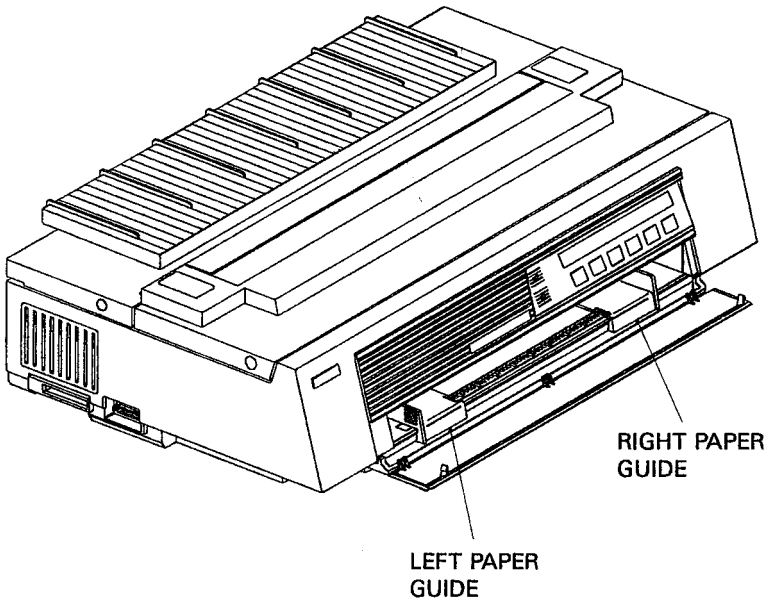
Main Features

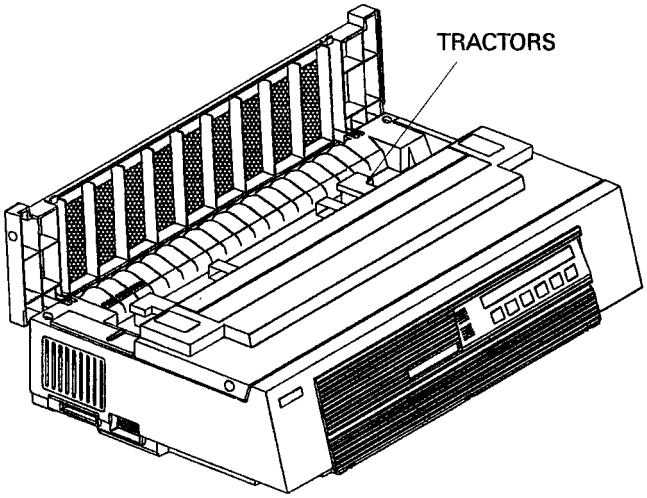
The following list informs you about the innovative capabilities of your printer:

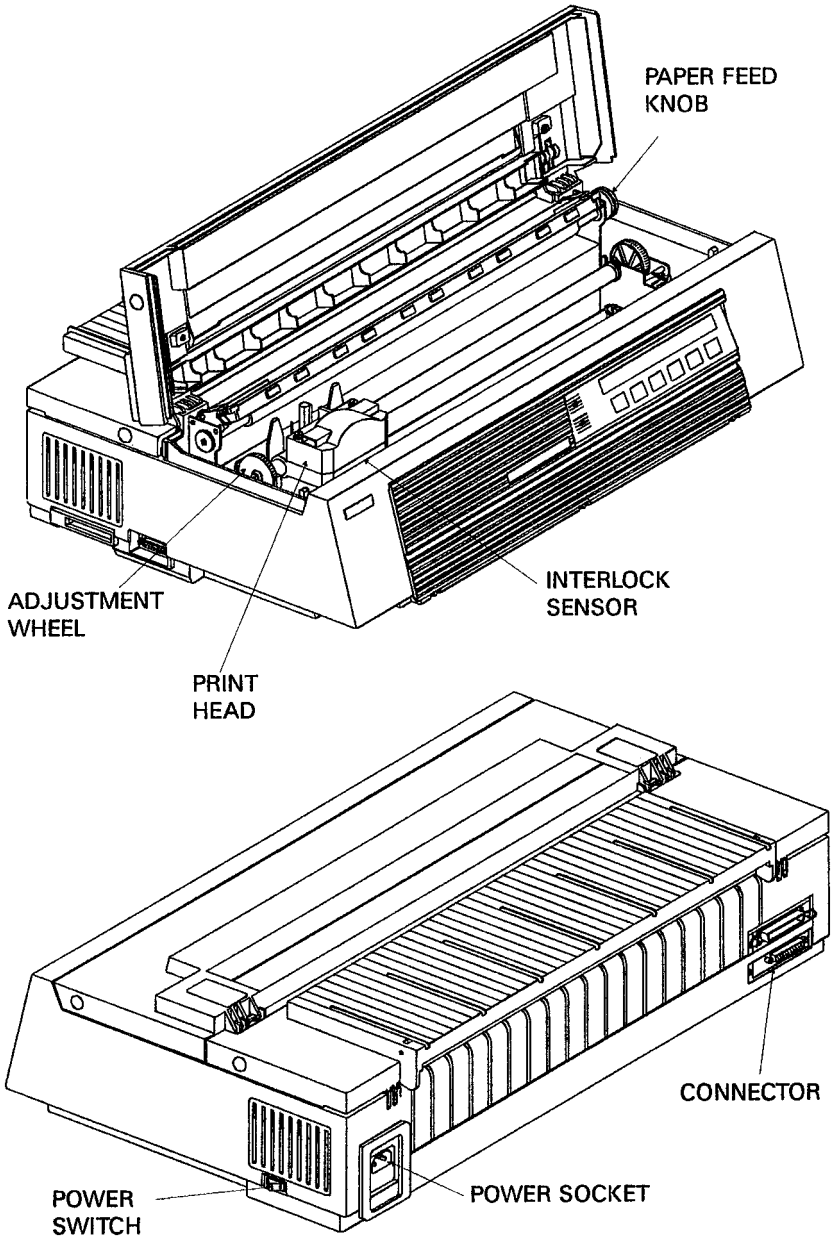
- *80 alpha-numerical characters LCD display showing the current printer state*
- *Operability in Twinax and ASCII modes*
- *Five national languages for the panel*
- *Quiet Printing Mode*
- *Double Interface with the Automatic Interface Switching function*
- *Paper handling completely automatic and controllable by operator panel*
- *Unattended mode (paper path sensors)*
- *Automatic handling of different thickness paper allowed by the Automatic Gap Adjustment (AGA) feature*
- *Complete paper handling with two fanfolds*
- *Diagnostic procedure given at the operator panel*
- *Use of the IPDS-Graphics mode (Model TA2 and TA3)*
- *Automatic Sheet Feeder (single or dual bin) option to handle large quantities of single sheets*
- *Bottom Feed option to allow printing on glued labels or heavy fanfold paper*

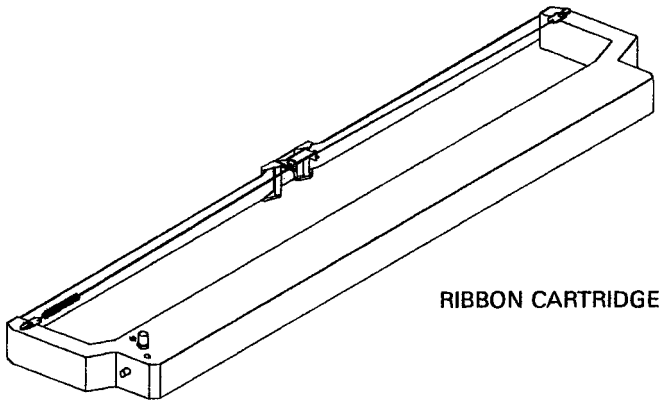
Printer Part Identification



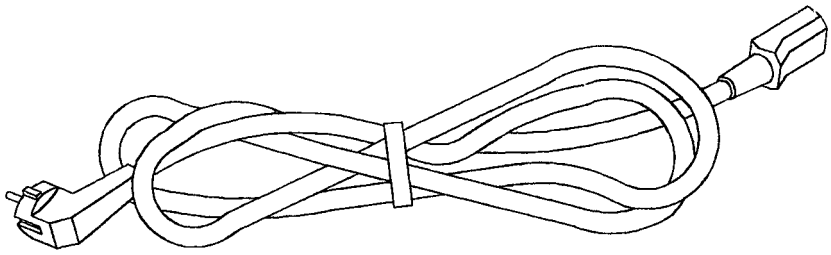

RIGHT PAPER GUIDE
LEFT PAPER GUIDE


TRACTORS

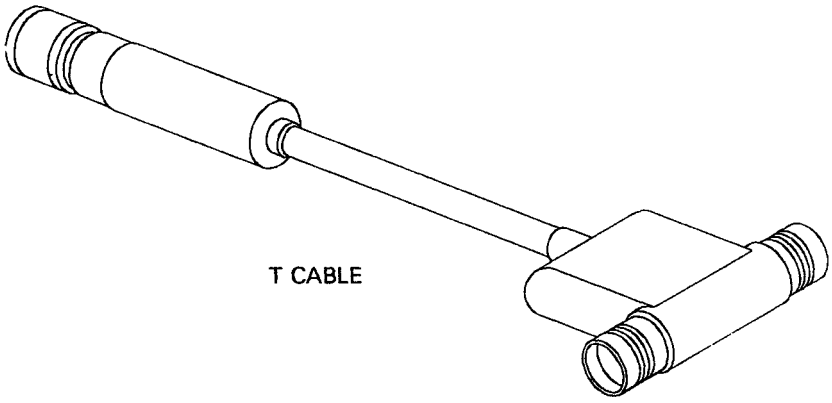

PAPER FEED
KNOB
ADJUSTMENT
WHEEL
PRINT
HEAD
INTERLOCK
SENSOR
CONNECTOR
POWER
SWITCH
POWER SOCKET



RIBBON CARTRIDGE

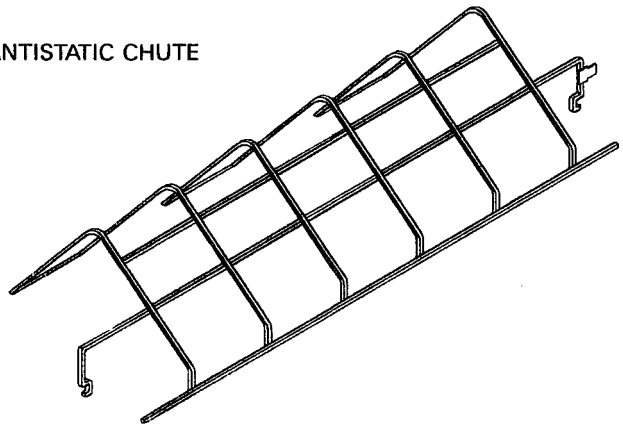


POWER CABLE

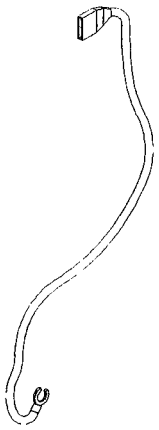


T CABLE

ANTISTATIC CHUTE



CONNECTION CABLE



Installation

This chapter describes the procedure to install your printer. It leads you from the first operations choosing a suitable location, unpacking and checking your printer and accessories through the intermediate steps of the installation - installing the ribbon, the T-cable, the parallel interface cable, turning on the printer to the paper loading.

Choosing a suitable location 2.2

Unpacking and Checking the Printer Accessories 2.3

Removing the Shipping Ties From the Print Head 2.5

Assembling your printer 2.6
The Ribbon Cartridge Installation 2.6
The T-cable Installation 2.12
Turning the Printer On 2.13
Selecting the Panel Language 2.15
The Antistatic Chute Installation 2.15
Loading Fanfold Paper 2.16

Summary of the Printer Setup Functions 2.23

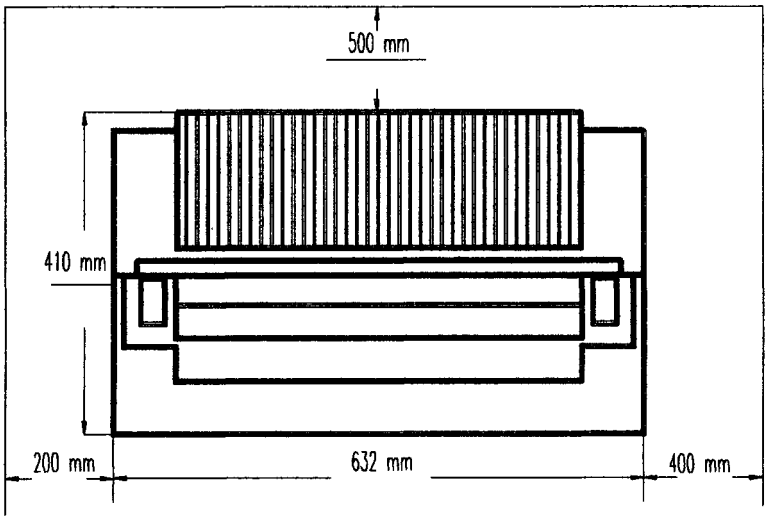
Pre-print Check List 2.26

Choosing a suitable location

The following points are important when choosing a suitable location for your printer:

- *the distance between the printer and the host computer must not exceed the length of the interface (Twinax Interface Cable:max. 1524 m (5000 ft) and ASCII Parallel Interface Cable:max. 15m (50ft));*
- *the location must be solid, smooth, horizontal and stable. Be sure that the location you choose offers enough room for ventilation, hookup of cables, paper handling, user work area and for other equipment you may want to use with your printer;*
- *your printer must not be exposed to direct sunlight, heat or cold, or humidity and dust;*
- *make sure that the power outlet is near the printer location you choose and easily accessible. Use a standard grounded outlet.*

The following drawing shows the recommended minimum clearances:

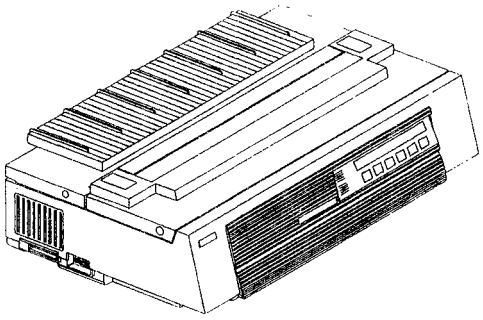


Unpacking and Checking the Printer Accessories

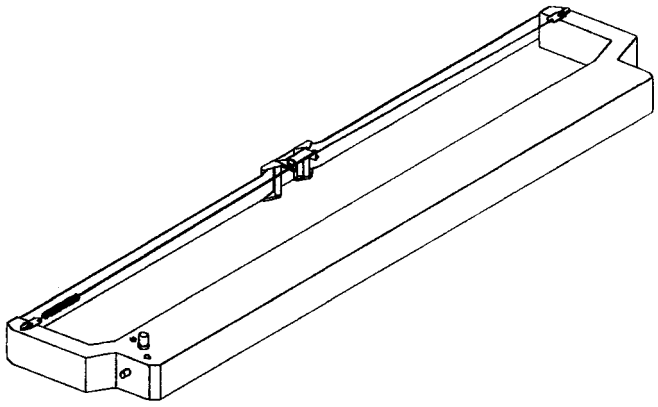
If your printer is not completely unpacked, unpack it according to the instructions attached to the outside of the shipping carton.

Check that the box contains all the parts that were shipped along with your printer. In addition to this user manual, you should find:

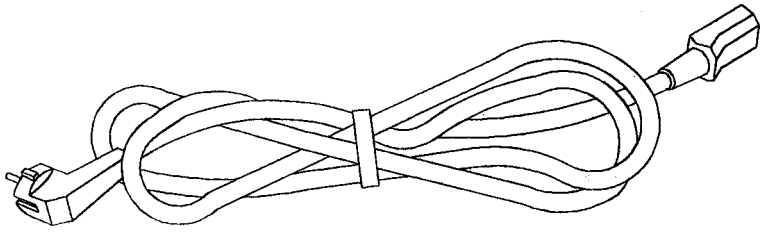
- *a printer*



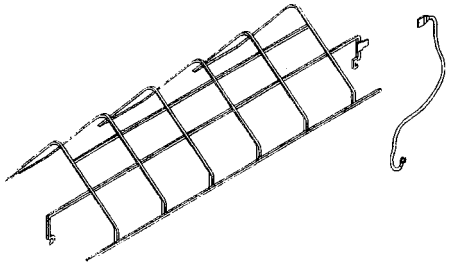
- *a ribbon cartridge*



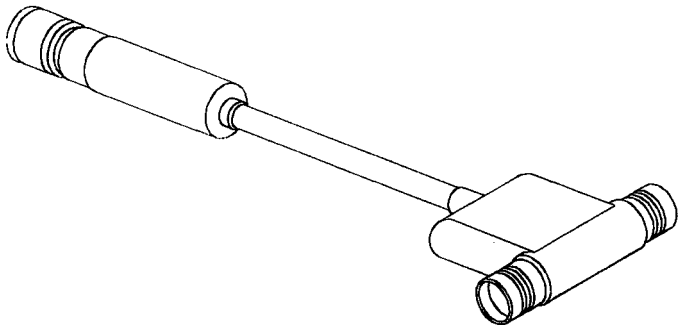
- *power cable*



- *an antistatic chute with its connection cable*



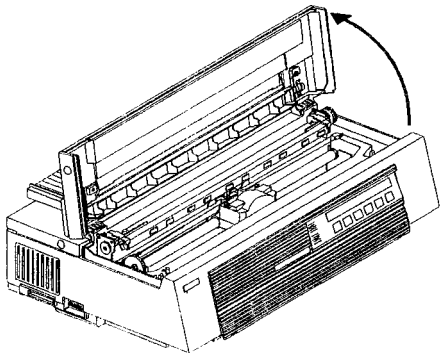
- *a T-cable*



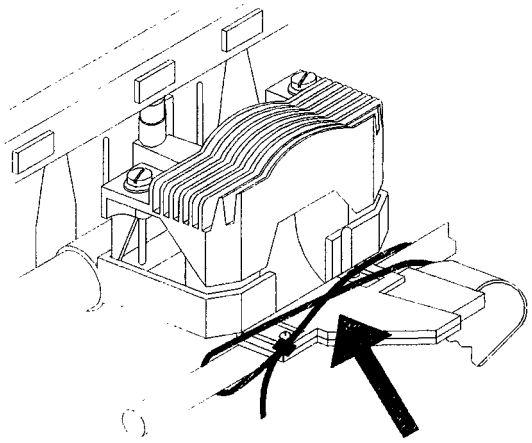
Removing the Shipping Ties From the Print Head

The shipping ties hold the print head in place while the printer is in transit. You must remove these ties before installing your printer. Proceed as follows:

1. Raise the top cover.



2. Cut the plastic ties that secure the print head.



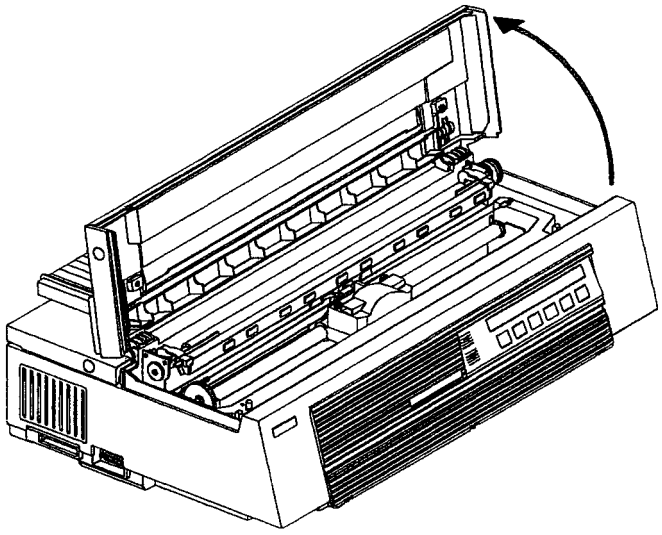
Assembling your printer

The Ribbon Cartridge Installation

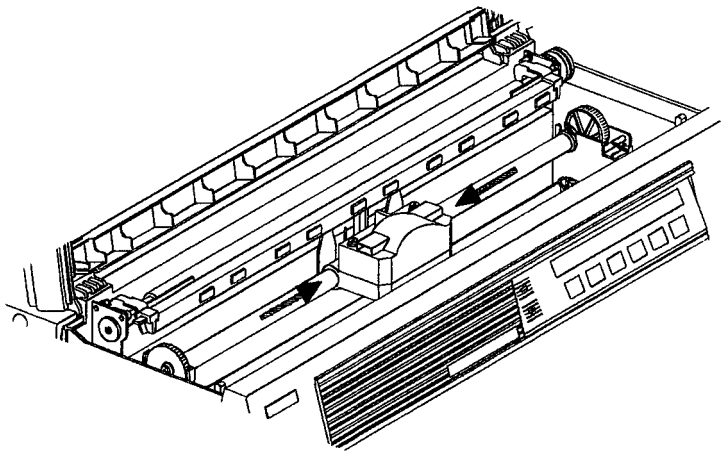
The following instructions help you to install the ribbon cartridge for the first time. A ribbon cartridge is included with your printer.

If you need to replace the used ribbon cartridge, see "Replacing the Ribbon Cartridge" in Chapter 5. Two types of ribbon cartridge are available: black or colour (option) ribbon.

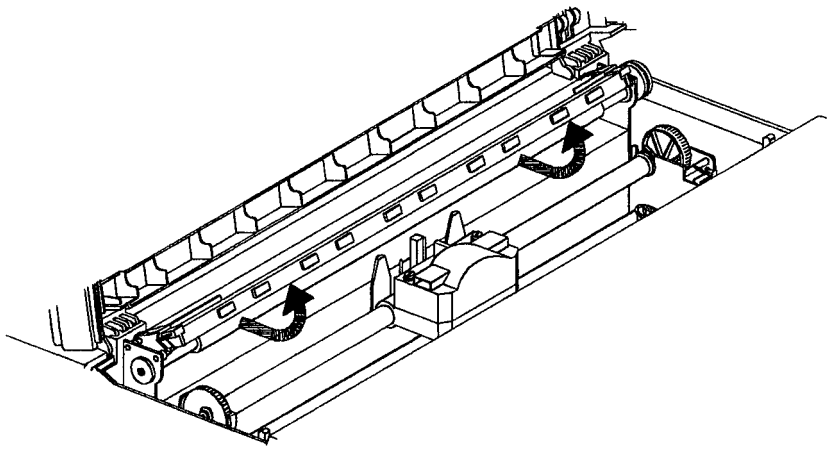
1. Raise the top cover.



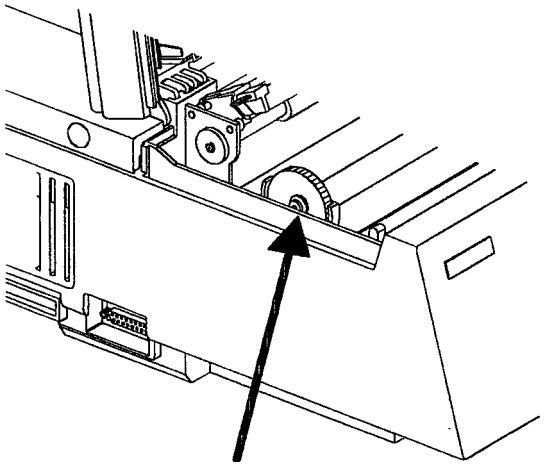
2. Move the printer carriage to the centre of the printer.



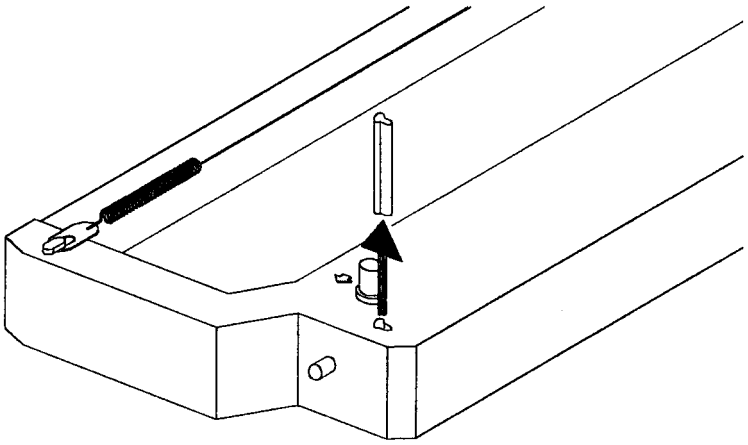
3. Pull the paper bail towards the front of the printer and lift it up.



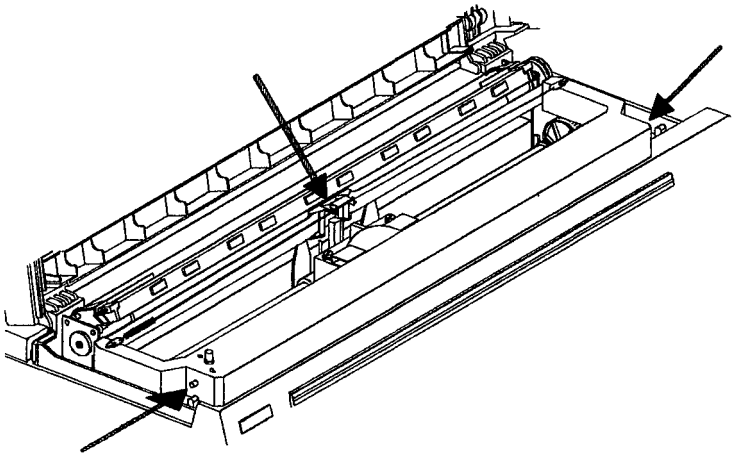
4. Move the adjustment wheel, placed on the left, towards the front of the printer ensuring that the print head leaves the platen.



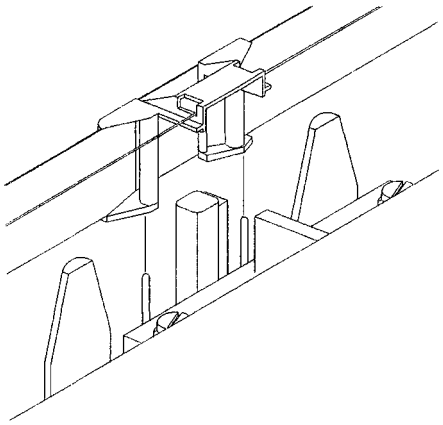
5. Remove the new ribbon cartridge from its bag. Remove and discard the holdfast that blocks the ribbon.



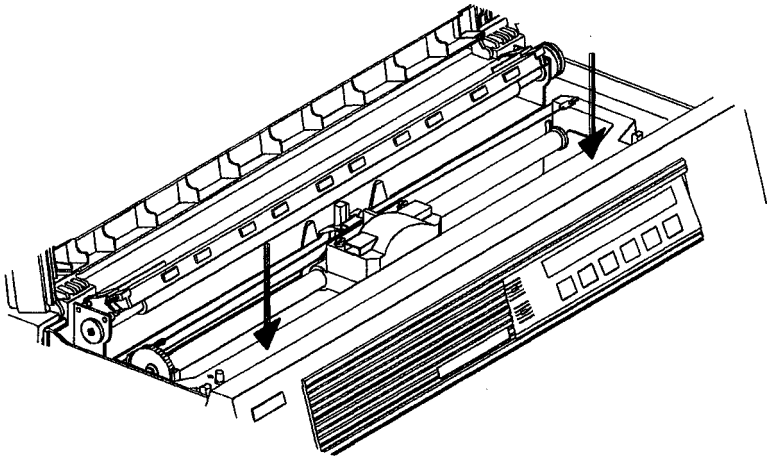
6. Align the cartridge over the retaining clips. Make sure that the plastic mask on the ribbon is positioned to one side of the print head. Lay the cartridge over the retaining clips.



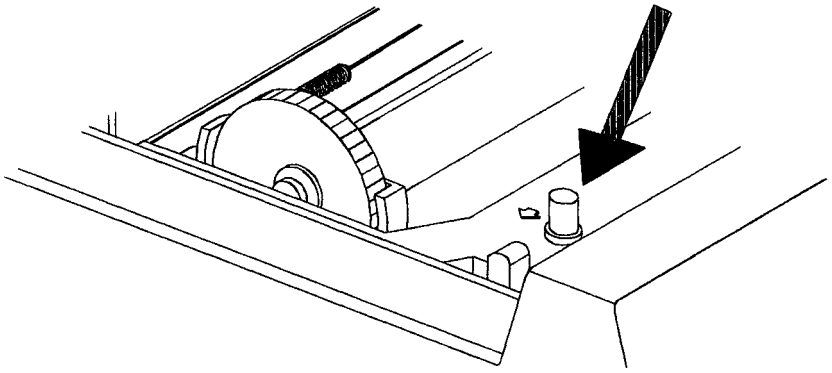
7. Slide the plastic mask on the ribbon until it is aligned with the print head. Slip the mask onto the pins at either side of the print head.



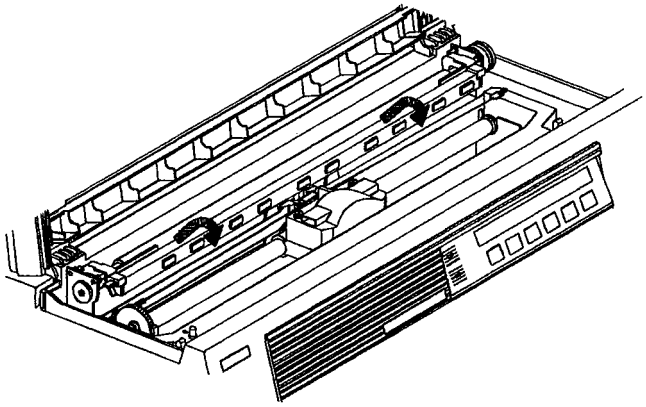
8. Push the cartridge gently down until it clips into place.



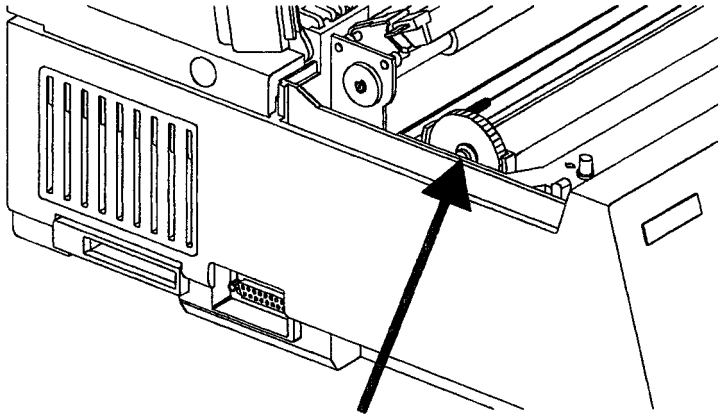
9. To tighten the ribbon, turn the tension knob in the direction shown by the arrow on the ribbon cartridge. Slide the print head on the carriage to check that the mask runs freely along the ribbon.



10. Reposition the paper bail by lifting it and pulling it towards the front of the printer, then releasing it gently. Before closing the top cover, make sure that the paper bail is correctly positioned, otherwise the top cover could be damaged.



11. Move the adjustment wheel towards the back of the printer to reposition it. Close the top cover.

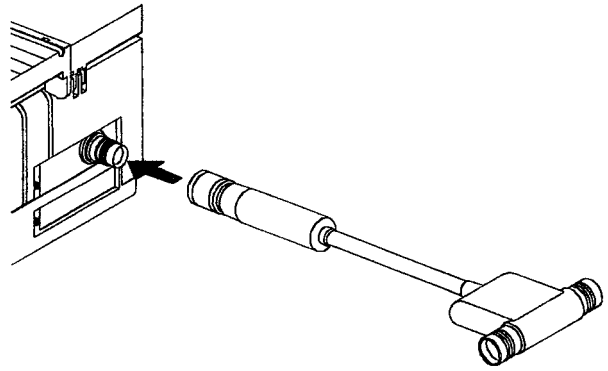


☞ ***If you are using a colour ribbon, remember to select the correct type of colour ribbon (RIBBON selection in the Configuration Setup procedure in chapter 3).***

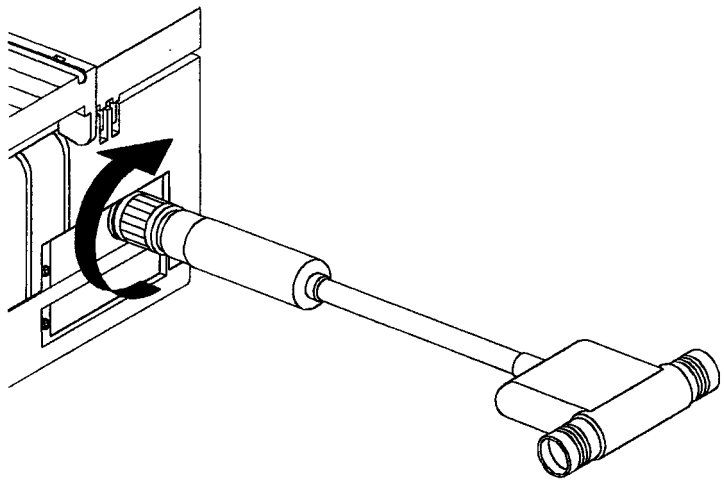
The T-cable Installation

A T-cable came with your printer and you should install it. Make sure that your printer is turned off. Proceed as follows:

1. Position the T-cable connector at the back of the printer and plug it into the printer interface socket.



2. Tighten the metal ring turning it clockwise.

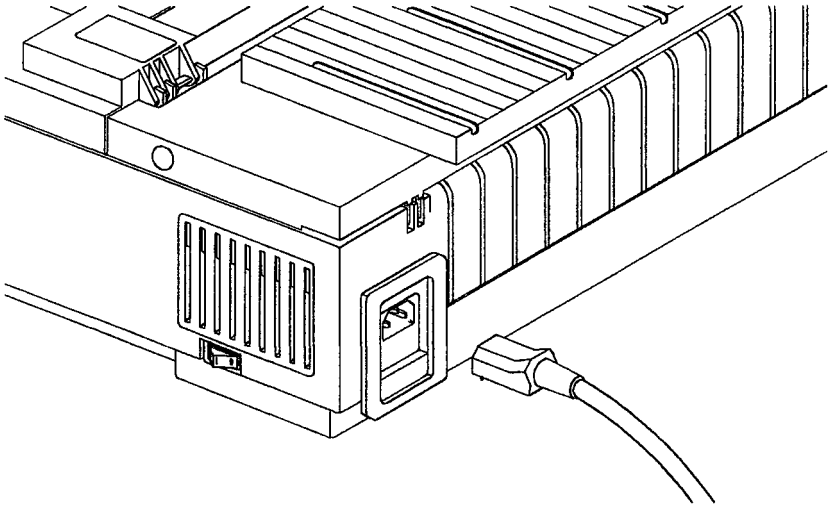


Before connecting the T cable, it is advisable to perform the printer setup procedure. Specifically, be sure that the printer address is set correctly. The printer setup procedure is described in the following chapter as well as the procedure for the interface cable connection.

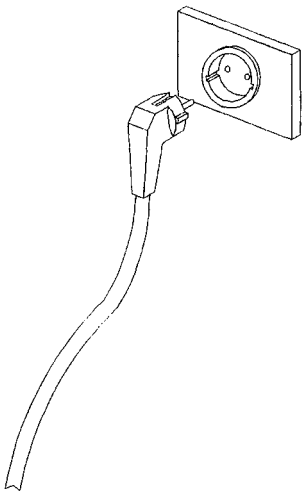
Turning the Printer On

Make sure that the power outlet is near the printer location and easily accessible.

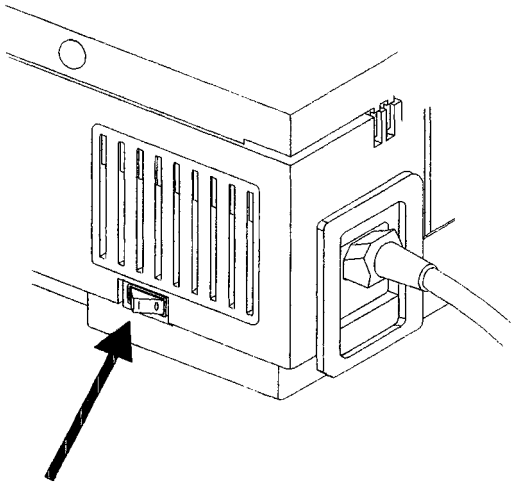
1. Make sure that the power switch on the printer is in the off position (0), then plug the power cable into the socket on the back of the printer.



2. Insert the other end of the power cable into a convenient outlet. Use a grounded outlet.

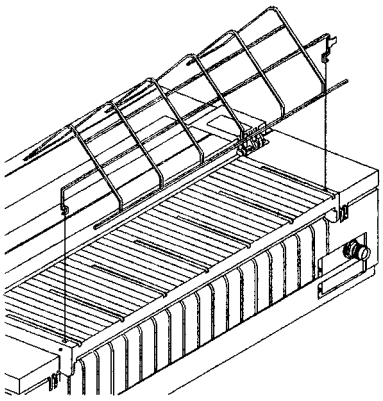


3. To turn the printer on, press the part of the power switch that is marked with "1" character.

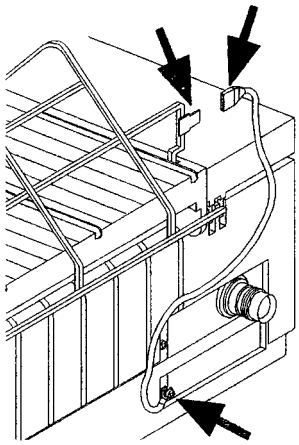


The Antistatic Chute Installation

1. Insert one of the two hooks of the chute in the corresponding groove of the printer rear cover, then repeat the operation for the other hook. Make sure that the fastener of the chute is on the same side of the printer interface connector.



2. Tighten the round edge of the cable into the interface screw and insert the shield connector into the fastener of the chute.



Loading Fanfold Paper

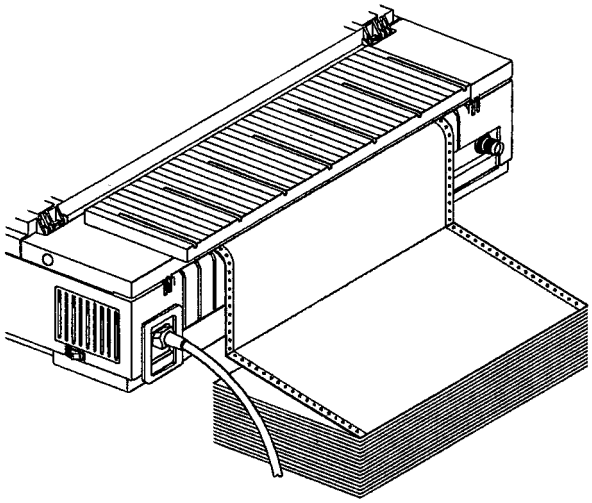
At this point of the installation procedure, you can load paper. The following instructions explain you how to load fanfold paper. If you want to load single sheet, see "Loading Single Sheet" in Chapter 4.

Be sure that you are using the correct paper in your printer. This is an essential starting point for obtaining good results in your printout. See the table below:

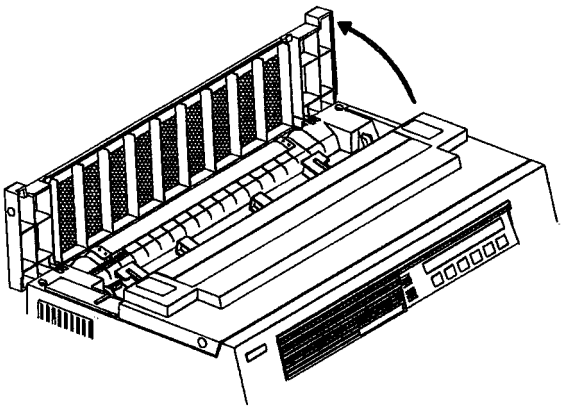
Width		Minimum Maximum	76 mm (3 inches) 444 mm (17.5 inches)
Length		Minimum (between perforation)	76 mm (3 inches)
Weight		Minimum Maximum	55 g/m2 80 g/m2
Number of copies		1 original plus 5 copies	
Weight	First sheet	Minimum Maximum	55 g/m2 75 g/m2
	Others	Minimum Maximum	35 g/m2 75 g/m2
	Carbon	Minimum Maximum	14 g/m2 35 g/m2
Total thickness		Minimum Maximum	0.06 mm (0.002 inches) 0.52 mm (0.02 inches)

The fanfold paper must be inserted from the rear of the printer. Proceed as follows:

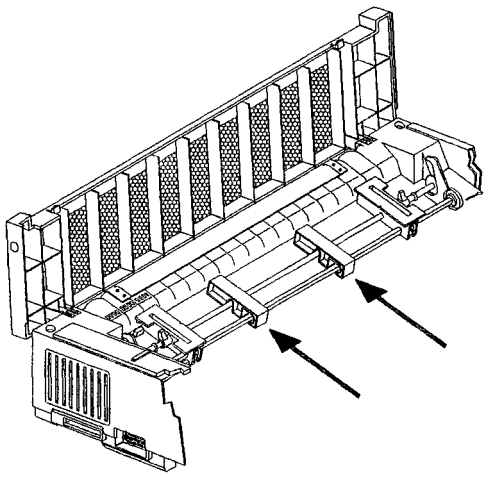
1. Feed the paper into the paper entry slot.



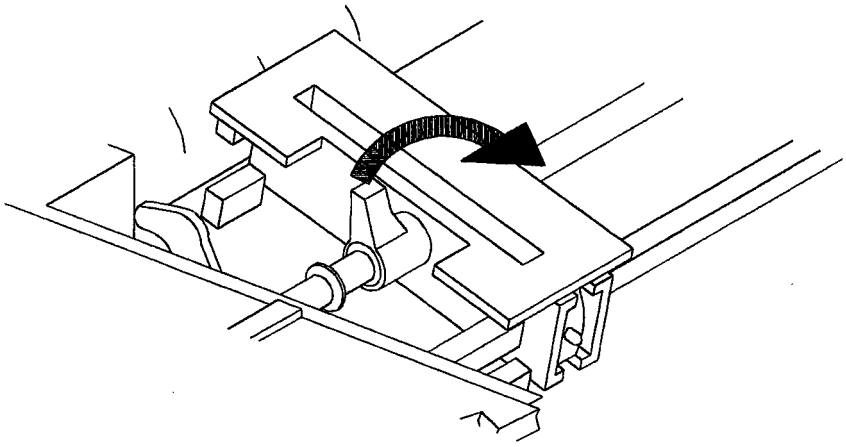
2. Raise the rear cover.



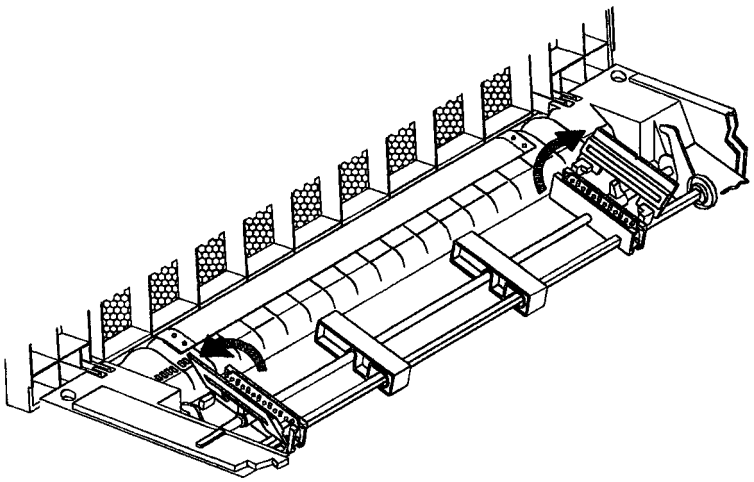
3. Move the spacers evenly along the tractor bar.



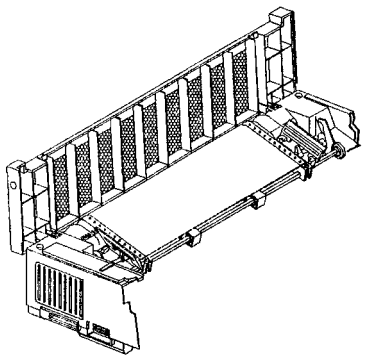
4. Unlock the left sprocket and slide it to the extreme left.



5. Lock the sprocket in place and open the cover.

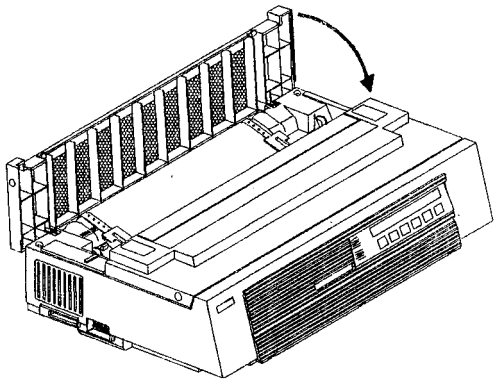


6. Position the holes of the paper over the sprocket and close the cover.

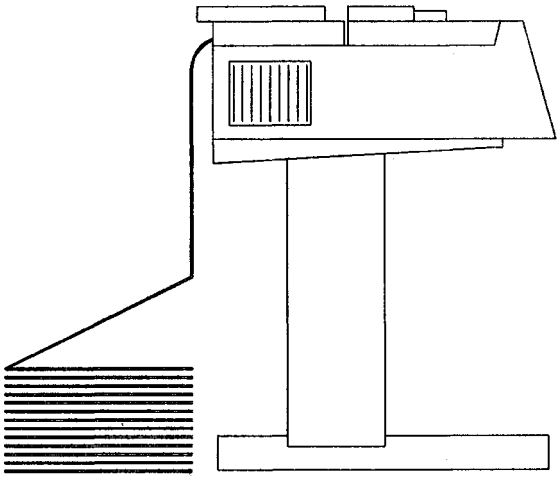


Perform the same operations for the right sprocket, adjusting it to the paper width.

7. Close the rear cover.



8. Position the stack of blank paper so that it feeds freely into the printer.



9. Turn the printer on. Make sure that all Basic Assurance Tests are performed. Finally, the display should show:

A0	**ACTIVE PRINTER ADDRESS**
SET#A	**CUSTOM SET LOADED AT POR**

that informs you about the printer address (the default address is "0") and on the setup enabled at power on (the default setup is "A").

Do not press any function key. In fact, the display will be changed automatically after few seconds into the next display configuration:

00	**F1**	**REAR**	**PATH**		**CONFIG**
	FEED	**LOAD**	**SELECT**		**& TEST**

10. Press the key corresponding to REAR LOAD message and the paper will be fed to the first printable line. The display will show:

00	**CURRENT PATH : REAR**				**CONFIG**
START	**FORM ↑**	**LINE ↑**	**P.ALGN**		**& TEST**

Press to enter the Configuration Setup and Test displays

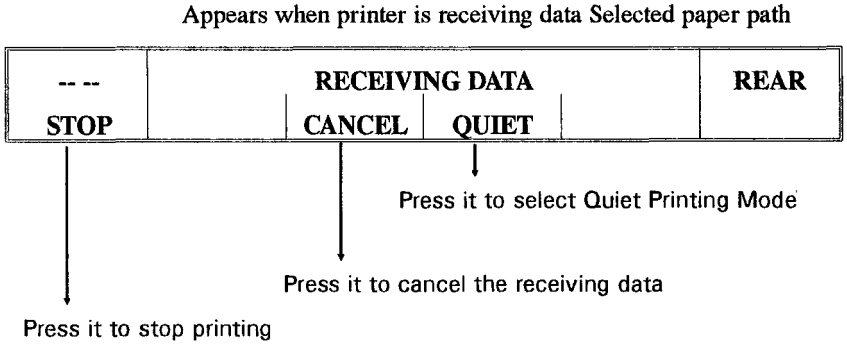
Press it to enter the Paper Alignment displays

Press it to advance one line at the current vertical spacing

Press it to advance to the next form

Press it to put printer ready to print

11. Press the key corresponding to the `00 START` message to put printer ready to print. The display will show:



If you press the key corresponding to the `QUIET` message, the Quiet Printing Mode will be selected. The `QUIET` message will be changed in `QUIET*` to indicate that the Quiet Printing Mode is active. The printing speed will be reduced by about on third thus also reducing the noise level. The Quiet Printing Mode selection is not stored permanently, so that it will be cancelled when you turn the printer off.

For more details on paper handling, see chapter 4 "Paper Handling".

Summary of the Printer Setup Functions

Now, it is useful to give a general overview of all functions available in the printer setup procedures (see "Printer Setup" in Chapter 3). This makes the user rapidly aware of how to personalize the printer, and in particular the default values that prevail. In the following list, the default values are written in brackets near each function:

In Twinax Mode

Printer logical address	ADDRESS (0)
Code Page selection	CODE PAGE (00 MULTI)
(*) 4224 emulation mode	4224 MODE (ENABLE)
Panel language selection	PANEL LANG (USA-UK)
Paper feed mode	FEED (F1)
Buzzer selection	BEEP (ON)
Form Feed in Ready state selection	ONLINE FF (DISABLE)
(*) Ribbon type selection	RIBBON (BLACK)
Characters per inch	CPI (10)
Maximum print position	MPP (132)
Lines per inch	LPI (6)
Maximum print lines	MPL (66)
Print quality	QUALITY (FAST & DP)
(*) Page selection	PAGE (FULL)
Left margin	LFT MARGN (0)
Top margin	TOP MARGN (12/72")
(*) Printing performance selection	PERFORMN (000 BC GR)
Text printing selection	TXT-PRINT (BIDIR)
(*) Graphics printing selection	GRA-PRINT (BIDIR)
(*) Bar code printing selection	B.C-PRINT (BIDIR)
Document on demand ejection	DOD-EJECT (IMMEDIATE)

Document insertion device ejection	DID-EJECT (TOF=TM)
Label form selection	LABELS (NO)
Quick function selection	QUICK-RDY (YES)
ASF model selection	ASF TYPE (SNGL BIN)
ASF selection	ASF SELECT (VIA HOST)
Bin linking option	BIN LINK (NO)
Default Bin (in F1,F2 or F3 mode)	DEFLT BIN (BIN1)
Default Bin (in F4 mode)	DEFLT BIN (MANUAL)
Transparent mode	TRANSPRNT (DISABLE)
Opening and closing character	TRANS SEQ (>)
Third bin redirection	ASF3REDIR (ASF3BIN1)

(*) for TA2 and TA3 only

In ASCII Mode

Printer logical address	ADDRESS (0)
Emulation selection	EMULATION (PROPRINTER)
(*)Character Set selection	CHAR. SET (CS2)
(*)Nation selection	NATION (CP 437)
(**)Character Set selection	CHAR. SET (CS2)
(**)Nation selection	NATION (USA)
Paper feed mode	FEED (F1(CFD)
Buzzer selection	BEEP (ON)
Form Feed in Ready state selection	ONLINE FF (DISABLE)
Ribbon type selection	RIBBON (BLACK)
Characters per inch	CPI (10)
Maximum print position	MPP (136)
Lines per inch	LPI (6)
Maximum print lines	MPL (66)

Print quality	QUALITY (FAST & DP)
NLQ Font selection	NLQ FONT (COURIER)
Left margin	LFT MARGN (0/50")
Top margin	TOP MARGN (12/72")
Skip over function	SKIPOVER (0)
Text printing selection	TXT-PRINT (BIDIR)
Graphics printing selection	GRA-PRINT (BIDIR)
Bar Code printing selection	B.C.-PRINT (BIDIR)
Line Feed on Carriage Return	LF ON CR (NO)
Carriage Return on Line Feed	CR ON LF (NO)
Slashed Zero function	SERO SLASH (NO)
Compressed printing	HOST COMPR (17.1)
Labels form selection (if optional Bottom Tractor Feed is installed)	LABELS (NO)
Quick function selection	QUICK-RDY(YES)
Document on demand ejection	DOD-EJECT (IMMEDIATE)
Document insertion device ejection	DID-EJECT (TOF=TM)
Label form selection	LABELS (NO)
Quick function selection	QUICK-RDY (YES)
ASF model selection	ASF TYPE (SNGL BIN)
Bin linking option	BIN LINK (NO)
Default Bin (in F1,F2 or F3 mode)	DEFLT BIN (BIN1)
Default Bin (in F4 mode)	DEFLT BIN (BIN1)
Third bin redirection	ASF3REDIR (ASF3BIN1)
Panel language selection	PANEL LANG (USA-UK)

(*) in IBM Proprinter emulation only

(**) in EPSON emulation only

Pre-print Check List

Before your first printout, you must check that everything is ready for printing.

You may find it helpful to use the following pre-print check list to check your printer before printing:

- *Is the power turned on?*
- *Is the interface cable connected?*
- *Is paper properly loaded?*
- *Do you have enough paper for the job you are going to print?*
- *Is the ribbon cartridge correctly installed?*
- *Is the printer in Ready state?*
- *Have you set the proper setup values, as required for the job you are going to print?*

Operating

Your printer is provided with an innovative panel that allows an easy performance of the printer functions. This section introduces you to the panel usage so that you can set up your printer and then utilize it normally. Then, you will find the procedure to connect the interface cable.

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Indicators *3.3*
Display *3.3*
Function Keys *3.4*
Learning to Use the Panel *3.4*

The Printer Setup *3.5*
Introduction *3.5*
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Switching From Ready to Stop State *3.53*
Selecting the Paper Feed Mode *3.54*
Changing the Paper Path *3.55*
Performing the Tear Off Function *3.58*
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Connecting The Interface Cable *3.63*
Twinax Connection *3.63*
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Characteristics *3.65*
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Operator Panel Presentation

General Overview

The operator panel of your printer consists of two indicators, a 80-alphanumerical character display and six multi-task function keys. The indicators and the display show the operating state of the printer while the function keys allow you to change it when necessary.

The operator panel offers you a powerful way to control your printer. It allows you to communicate with it and to change its operating state when necessary. You can use the operator panel to check the state of the printer, activate functions or set new values for them.

Finally, the operator panel offers you several different working modes:

- ***Configuration Setup Mode***

You can configurate your printer according to your needs such as the print quality, paper margins and so on.

- ***Normal Operation Mode***

You can satisfy your daily job needs such as paper loading, paper alignments and so on.

- ***I/F Setup Mode***

You can activate the 2 available interface ports: TWINAX and the ASCII Parallel Interface Ports.

- ***Test Mode***

You can activate several tests to check the general state of the printer.

- ***Help Mode***

You can obtain printed flowcharts on how to use the printer and eventually, modify the operator panel language.

Indicators

There are two indicators on the operator panel to report the basic information of the printer conditions. These indicators will be recognized by the colour of their light:

Green indicator

Lit when the printer is turned on.

Unlit when the printer is turned off.

Blinks when there is still data in the input buffer.

Orange indicator

Unlit when the printer is normally operating (the system is available and the printer is polled).

Lit to call the operator attention when

- a link error condition occurs (system not available, parity error);
- an activity on the line not addressed to the printer is detected (no line sync).

Display

The display is a liquid cristal display and shows up to 80 alpha-numeric characters on two different rows (40 alpha-numeric characters for each row).

A message is defined as the part of the display line that is exactly over a function key. You can see up to six messages corresponding to the six functions keys of the operator panel. A bar is displayed to divide one message from another.

A display configuration is defined to be the two lines of messages that compose the display.

Function Keys

The function keys of the operator panel are positioned under the display and they are activated by pressing the squared area. Six function keys are available to change the printer settings shown by the display. Each function key is related to the part of the display placed exactly over the key so that if you wish to change the message in the leftmost position of the display, you should press the first function key and so on for the other messages. For example, if you would like to change the FEED mode type, press the key that is under the F1 FEED message:

00	F1 FEED	REAR LOAD	PATH SELECT		CONFIG & TEST
Key#1	**Key#2**	**Key#3**	**Key#4**	**Key#5**	**Key#6**

Learning to Use the Panel

There is a strict relationship between display and function keys. In fact, the message of the display can be affected by pressing the function key placed exactly under the message. In this way, the keys of the operator panel assume the functions that are reported on the related area of the display.

Often, the top row contains only information message while the indication on the bottom row describe what action will be performed when the corresponding key is pressed.

The Printer Setup

Introduction

The printer setup is performed via the Interface Setup and the Configuration Setup procedures that allows to set most of the printer functions. The selection of the desired values is performed via operator panel. The display shows the available items. The function keys allow to scan these items and their values.

Five different setup settings (Custom Sets) can be selected: A, B, C, D, and T where A is the default setting and T is the temporary setting.

Entering the Printer Setup procedure

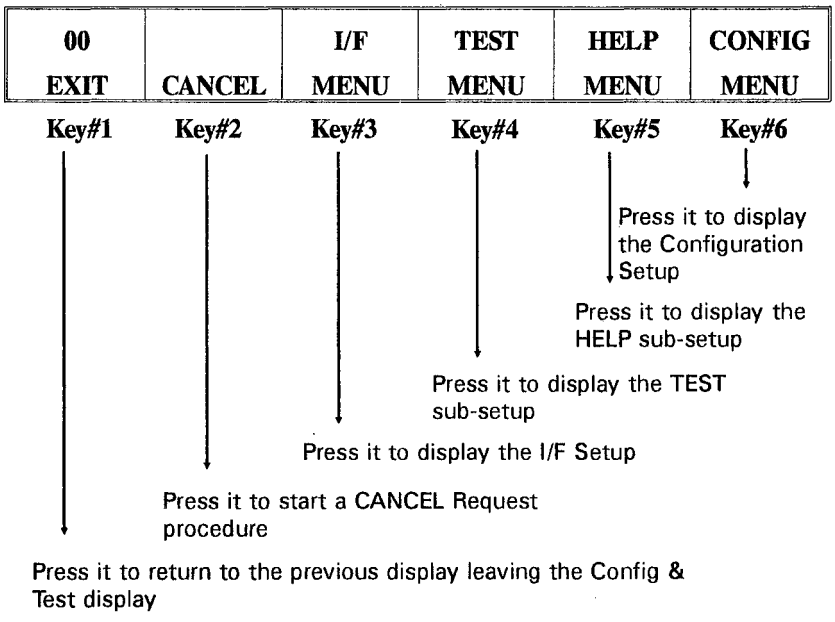
Turn the printer on and control that all Basic Assurance Tests are performed. Finally, you should see the following display configuration:

A0	**ACTIVE PRINTER ADDRESS**
SET#A	**CUSTOM SET LOADED AT POR**

that informs you about the printer address ("0" is the default) and the active setup setting ("Set A" is the default). Do not press any function key; in fact, the display will be changed automatically after few seconds into the next display configuration, if you enter the Printer Setup procedures for the first time and no paper is present in any paper path:

00	**F1**	**REAR**	**PATH**		**CONFIG**
	FEED	**LOAD**	**SELECT**		**& TEST**

Press the key corresponding to the CONFIG & TEST message, the display will show:



If you would like to enter the Printer Setup procedures when the printer is already turned on and paper is present in one of the paper paths make sure that no data is present in the printer buffer and that the display shows:

00	CURRENT PATH: xxxx			CONFIG
START	FORM ↑	LINE ↑	P.ALGN	& TEST

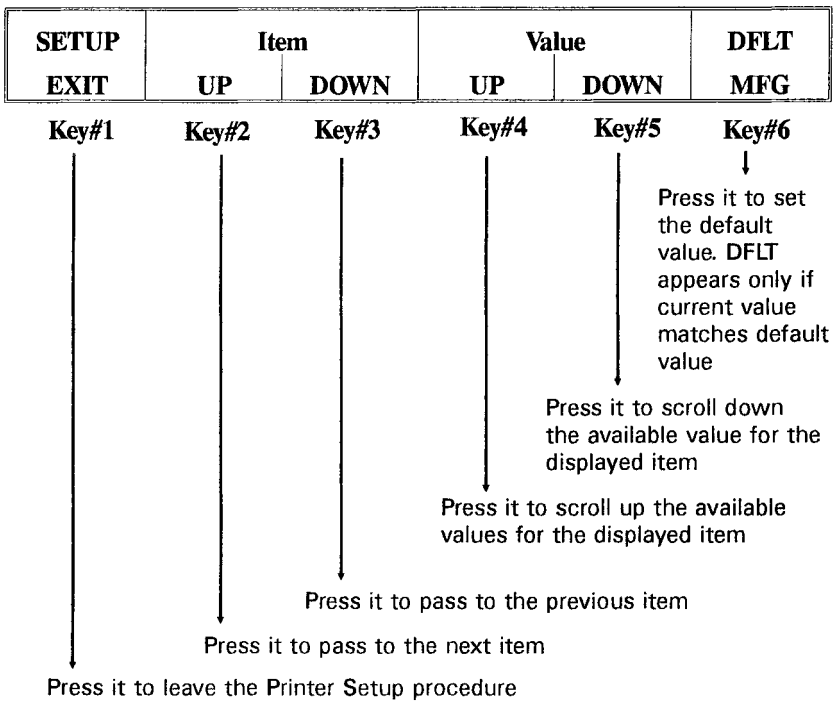
Press the key corresponding to the CONFIG & TEST message, the display will show:

00		I/F	TEST	HELP	CONFIG
EXIT	CANCEL	MENU	MENU	MENU	MENU

press the key corresponding to the message and it will be entered.

Moving inside the Printer Setup procedure

Any display configuration of the I/F Setup or the Configuration Setup procedures has the following structure:



Use the function keys as explained in the figure above and control the result of your action on the display.

When the desired value is displayed, you can select it by changing the item. The final setting will be performed when you leave the Printer Setup procedure.

The I/F Setup Procedure

The I/F Setup procedure allows to select the following printer functions:

- *I/F Type selection*
- *Automatic Interface Switching*
- *Form Feed at End-Of-Job selection*
- *End Of Job Time Out selection*

- *Printer Address selection (Twinax mode selected)*
- *Buffer Size selection (ASCII mode selected)*
- *Data bits selection (ASCII mode selected)*
- *SELECTIN Signal selction (ASCII mode selected)*
- *ACK mode (ASCII mode selected)*

The factory default settings are:

Item	Default Setting
I/F type selection (active when AUTOSWITCH is disabled)	TWINAX (Twinax Interface is selected)
Automatic Interface Switching selection	YES (Automatic Switching to find out the Active Host Interface)
Form Feed at End-Of-Job selection	YES (a FF is performed to start next print jobs on a new page)
End Of Job Time Out selection	5 SEC(the time after which the current active mode is abbandoned.)
(*) Printer Address selection	0 (Address 0 selected)
(**) Buffer Size selection	2KB (2KBytes selected)
(**) Data bits selection	8 (8 data bits selected)
(**) SELECTIN Signal	ON (the SELECTIN signal is HIGH)
(**) ACK Mode	INSIDE (ACK pulse can be issued INSIDE the BUSY signal

- *(*) this item is enabled only if the Twinax mode is selected*
- *(**) this item is enabled only if the ASCII mode is selected*

To enter the I/F Setup procedure, proceed as follows:

1. Turn the printer on. After the initialization tests, the display should show:

A0	ACTIVE PRINTER ADDRESS
SET#A	CUSTOM SET LOADED AT POR

Do not press any key and wait for the automatic change of the display. If no paper is present in any paper path, the display will show:

00	F1	REAR	PATH		CONFIG
	FEED	LOAD	SELECT		& TEST

otherwise, if paper is present in paper path the display will show:

00	CURRENT PATH: xxxx				CONFIG
START	FORM ↑	LINE ↑	P.ALGN		& TEST

2. Press the key corresponding to the CONFIG & TEST message, the display will show:

00		I/F	TEST	HELP	CONFIG
EXIT	CANCEL	MENU	MENU	MENU	MENU

3. Press the key corresponding to the I/F MENU message and the I/F Setup procedure is entered.

The first display configuration of the I/F Setup procedure is shown and you are ready to move inside the procedure using the keys corresponding to the UP and DOWN message both within item and value fields as previously explained.

The display configurations of the I/F Setup procedure are:

I/F TYPE SELECTION

SETUP	I/F SELECT		:	TWINAX		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

TWINAX Twinax Interface port

ASCII ASCII Parallel Interface port

☞ ***This selection will be activated when the Autoswitch mode is disabled (AUTOSWITCH = NO)***

AUTOMATIC INTERFACE SWITCHING SELECTION

SETUP	AUTOSWITCH		:	YES		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

YES The Automatic Interface Switching is enabled

NO The Automatic Interface Switching is disabled

FORM FEED AT END-OF-JOB SELECTION

SETUP	FF AT EOJ		:	YES		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

YES A Form Feed is performed to start next print jobs on a new page

NO No Form Feed is performed

END OF JOB TIME OUT

SETUP	EOJ T OUT		:	5 SEC.	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

After a few seconds the current active mode is abandoned

The available values are:

5 SEC. After 5 sec.

.

.

.

.

99 SEC. After 99 sec.

When the current active mode is abandoned, the IDLE mode will be entered

ADDRESS (only if the Twinax interface is selected)

SETUP	ADDRESS		:	0	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

0 Address 0

1 Address 1

2 Address 2

3 Address 3

4 Address 4

5 Address 5

6 Address 6

BUFFER SIZE (only if the ASCII interface is selected)

SETUP	BUFFER		:	2 KB	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

256 B 256 Bytes

2 KB 2 Kbytes

128 KB 128 Kbytes

DATA BITS (only if the ASCII interface is selected)

SETUP	DATA BITS		:	8	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

8 8 bits

7 7 bits

SELECTIN SIGNAL (only if the ASCII interface is selected)

SETUP	SELECTIN		:	ON	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

ON Printer assumes the Input signal to be always HIGH

HOST Printer obeys to the Input Signal

ACK MODE (only if the ASCII interface is selected)

SETUP	ACK MODE		:	INSIDE	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

INSIDE ACK pulse can be issued INSIDE the BUSY signal

DURING ACK pulse can be issued DURING the BUSY signal

OUTSIDE ACK pulse can be issued OUTSIDE the BUSY signal

At this point if you press the key corresponding to the SETUP EXIT message, the display will show the following display configuration:

TW 00	CHANGES WERE MADE!				
QUIT!	S/N	RESTOR	SAVE	D.INFO	BACK

Press it to return to the previous display configuration

Press it to open a panel to view/change the Device Info parameters

Press it to save in NVM the changes and exit the I/F Setup going to the MAIN or FEED MENU display panel

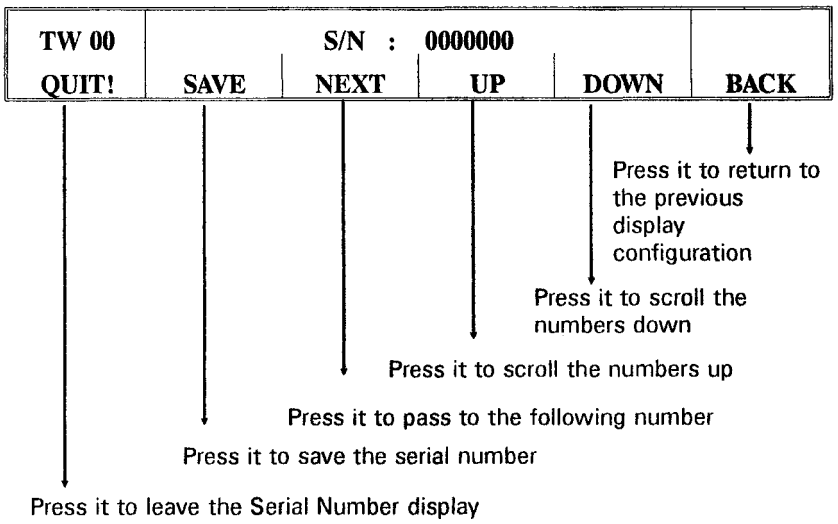
Press it to restore the I/F Setup default parameters values

Press it to open a panel to view/change the Serial Number

Press it to leave the I/F Setup mode without saving any change

The field in the left upper corner of the I/F EXIT display normally shows the acronym of the current selected interface : TW 00 (Twinax mode), AP 00 (ASCII Proprinter mode) or AE 00 (ASCII EPSON). If the interface is going to be changed, the field will display the following acronyms: TW > AP, TW > AE, AP > TW or AE > TW. to advise that the interface selection will change.

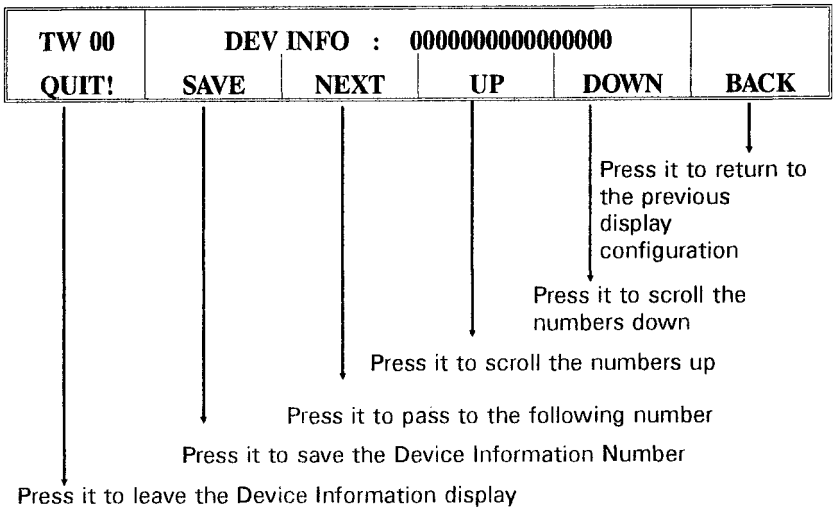
If you press the key corresponding to the S/N message, the Serial Number selection is entered and the display will show:


TW 00
S/N : 0000000
QUIT!
SAVE
NEXT
UP
DOWN
BACK
Press it to return to the previous display configuration
Press it to scroll the numbers down
Press it to scroll the numbers up
Press it to pass to the following number
Press it to save the serial number
Press it to leave the Serial Number display

The available "0" values are:

0.....9	0 to 9 number character
A.....Z	A to Z letter character
$	Dollar character
@	Commercial character
#	Pound sign character

If you press the key corresponding to the DEV INFO message, the Device Information Number selection is entered and the display will show:


TW 00
QUIT!
DEV INFO : 0000000000000000
SAVE
NEXT
UP
DOWN
BACK
Press it to return to the previous display configuration
Press it to scroll the numbers down
Press it to scroll the numbers up
Press it to pass to the following number
Press it to save the Device Information Number
Press it to leave the Device Information display

The DEV INFO SAVED message will appear when the Device Information Number is saved.

To leave the I/F Setup mode, press the key corresponding to the QUIT! message, the display will show:

TW 00	CURRENT PATH: REAR				CONFIG
START	FORM ↑	LINE ↑	P.ALGN		& TEST

The Configuration Setup Procedure

The Configuration Setup procedure allows to select printer functions in Twinax or ASCII mode.

TWINAX MODE SETUP

- *Code Page Selection*
- *4224 Emulation Mode (for Model TA2 and TA3 only)*
- *Panel Language Selection*
- *Paper Feed Mode*
- *Buzzer Activation*
- *Form Feed in Ready State Selection*
- *Ribbon Type (for Model TA3 only)*
- *Characters per Inch*
- *Maximum Print Position*
- *Lines per Inch*
- *Maximum Print Lines*
- *Print Quality*
- *Page Selection - Printable Area*
- *Left Margin*
- *Top Margin*
- *Printing Performance (for Model TA2 and TA3 only)*
- *Text Printing Mode*
- *Graphics Printing Mode (for Model TA2 and TA3 only)*
- *Bar Code Printing Mode (for Model TA2 and TA3 only)*
- *Document On Demand (DOD) Ejection Mode*
- *Document Insertion Device (DID) Ejection Mode*
- *Label Form Selection (with Bottom Feed installed)*
- *Quick Function*
- *ASF Model Selection*
- *Bin Linking Function*
- *Default Bin (in F1, F2 or F3 mode)*
- *Default Bin (in F4 mode)*

- *Transparent Mode*
- *Opening and Closing Character*
- *Third Bin Redirection*

ASCII MODE SETUP

- *Emulation Type*
- *Character Sets (IBM Proprinter / EPSON Emulations)*
- *Nation Character Sets*
- *Paper Feed Mode*
- *Buzzer Activation*
- *Form Feed in Ready State Selection*
- *Ribbon Type*
- *Characters per Inch*
- *Maximum Print Position*
- *Lines per Inch*
- *Maximum Print Lines*
- *Print Quality*
- *Fonts*
- *Left Margin*
- *Top Margin*
- *Skip over function*
- *Text Printing Mode*
- *Graphics Printing Mode*
- *Bar Code Printing Mode*
- *Line Feed on Carriage Return*
- *Carriage Return on Line Feed*
- *Slashed Zero Function*
- *Compressed Printing*

- *Document On Demand (DOD) Ejection Mode*
- *Document Insertion Device (DID) Ejection Mode*
- *Label Form Selection (with Bottom Feed installed)*
- *ASF model Selection*
- *Bin linking Function*
- *Default Bin (in F1, F2 or F3)*
- *Default Bin (in F4)*
- *Third Bin Redirection*
- *Quick Function*
- *Language Selection*

TWINAX Mode Default Settings

The factory default settings in Twinax mode are the following:

Item	Default Setting
Code page selection	00 MULTI (International Set)
(*) 4224 emulation mode	ENABLE (4224 protocol enabled)
Panel language selection	USA-UK (English messages)
Paper feed mode	F1 (Continuous Form Device)
Buzzer selection	ON (Buzzer enabled)
FF in Ready state	DISABLE (no FF in Ready)
(*) Ribbon type selection	BLACK (Black ribbon)
Characters per inch	10 (10 cpi)
Maximum print position	132 (132 characters)
Lines per inch	6 (6 lpi)
Maximum print lines	66 (66 lines)
Print quality	FAST & DP (Draft printing)
(*) Page selection	FULL (Full printable area)

Left margin	0 (no margin)
Top margin	12/72" (1/6 inch)
(*) Printing performance selection	000 BC GR (Bar code and graphics high resolution printing)
Text printing selection	BIDIR (Bidirectional printing)
(*) Graphics printing selection	BIDIR (Bidirectional printing)
(*) Bar code printing selection	BIDIR (Bidirectional printing)
Document on demand ejection	IMMEDIATE (immediate ejection)
Document insertion device ejection	TOF-TM (current vertical position)
(**)Label form selection	NO (Label handling disabled)
Quick function selection	YES (Quick enabled)
(***) ASF model selection	SNGL BIN (single bin model)
(***) ASF selection	VIA HOST (Bin selection via host)
(***) Bin linking function	NO (Bin linking disabled)
(***) Default Bin in F1, F2 or F3 mode	BIN1 (Bin 1 is selected)
(***) Default Bin in F4 mode	MANUAL (Manual Feed)
(***) Bin linking option	NO (Bin linking disabled)
(***) Transparent mode	DISABLE (Disabled)
(***) Opening and closing character	> (1st and 2nd characters for transparent mode sequence)
(***)Default for third bin	ASF3BIN1 (Bin 1 as default for third bin)

ASCII Mode Default Settings

The factory default settings in ASCII mode are the following:

Item	Default Setting
Emulation Type selection	PROPRINTER(IBM Proprinter emulation)
Character Sets selection	CS2 (IBM Proprinter emulation selected)
	CS2 (EPSON emulation selected)
Nation Character Sets selection	CP 437 (IBM Proprinter emulation selected)
	USA (EPSON emulation selected)
Paper feed mode	F1 (Continuous Form Device)
Buzzer selection	ON (Buzzer enabled)
FF in Ready state	DISABLE (no FF in Ready)
Ribbon type selection	BLACK (Black ribbon)
Characters per inch	10 (10 cpi)
Maximum print position	136 (136 characters)
Lines per inch	(6 lpi)
Maximum print lines	66 (66 lines)
Print quality	FAST & DP (Draft printing)
NLQ Font selection	COURIER (Courier font)
Left margin	0/50" (no margin)
Top margin	12/72" (1/6 inch)
Skip over function	0 (in number of lines at current vertical spacing-Lpi-)
Text printing selection	BIDIR (Bidirectional printing)
Graphics printing selection	BIDIR (Bidirectional printing)
Bar code printing selection	BIDIR (Bidirectional printing)
Line Feed on Carriage Return	NO (No LF on CR)

Carriage Return on Line Feed	NO (No CR on LF)
Slashed Zero function	NO (Slashed Zero disabled)
Compressed printing	17.1 (17.1 cpi)
Document on demand ejection	IMMEDIATE (immediate ejection)
Document insertion device ejection	TOF-TM (current vertical position)
(**)Label form selection	NO (Label handling disabled)
(***) ASF model selection	SNGL BIN (single bin model)
(***) Bin linking function	NO (Bin linking disabled)
(***) Default Bin in F1, F2 or F3 mode	BIN1 (Bin 1 is selected)
(***) Default Bin in F4 mode	MANUAL (Manual Feed)
(***) Third bin redirection	ASFBIN1 (Bin 1 as default for third bin)
Quick function selection	YES (Quick enabled)
Panel Language	USA-UK (English language)

- *(*) this item is enabled only for Model TA2 and TA3*
- *(**) this item is enabled only if the Bottom Feed (option) has been installed*
- *(***) this item is enabled only if the Automatic Sheet Feeder (option) has been installed*

To enter the Configuration Setup procedure proceed as follows:

1. Press the key corresponding to the CONFIG & TEST message,

if the printer is in TWINAX mode the display will show:

TW 00		**I/F**	**TEST**	**HELP**	**CONFIG**
EXIT	**CANCEL**	**MENU**	**MENU**	**MENU**	**MENU**

or

if the printer is in ASCII mode the display will show:

AP 00	**BUFFER**	**I/F**	**TEST**	**HELP**	**CONFIG**
EXIT	**RESET**	**MENU**	**MENU**	**MENU**	**MENU**

or

AE 00	BUFFER	I/F	TEST	HELP	CONFIG
EXIT	RESET	MENU	MENU	MENU	MENU

2. Press the key corresponding to the CONFIG MENU message and the Configuration Setup procedure is entered:

If the printer is in TWINAX mode, the display configurations will be the following:

CODE PAGE SELECTION

SETUP	CODE PAGE		:	00 MULTI	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

0 MULTI	Multilingual (International #5)
01 US	English US (United States)
02 GERMAN	Austria/Germany
03 BELGIAN	Belgium
04 BRAZIL	Brazil
05 CANADA	Canadian-French
06 DAN/NOR	Denmark/Norway
07 FIN/SWE	Finland/Sweden
08 FRENCH	France
09 ITALIAN	Italy
10 JAPAN	Japan-English
11 KATAKAN	Japan-Katakana
12 PORTUG	Portugal
13 SPANISH	Spain (Spanish speaking)

14 SPN SPK	Spain and Spanish speaking
15 UK	English UK (United Kingdom)
89 KOREAN	Korea
90 ICELAND	Icelandic
91 LATIN 2	Latin 2/ROECE
92 YUGOSLV	Yugoslav
93 TURKISH	Turkish
94 OLD GREE	Old Greek
95 CYRILIC	Cyrilic
96 HEBREW	Hebrew
97 ARABIC	Arabic
98 THAI	Thai
99 NEW GRE	New Greek

4224 EMULATION MODE (Model TA2 and TA3 only)

SETUP	4224 MODE		:	ENABLE	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

where the available values are:

ENABLE	The 4224 protocol emulation is enabled.
DISABLE	The 4224 protocol emulation is disabled and the printer works as 4230 printer.

PANEL LANGUAGE SELECTION

SETUP	PANEL LANG		:	USA-UK	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

where the available values are:

USA-UK	English
DEUTCH	German
FRANCE	French
ITALIA	Italian
ESPANA	Spanish

PAPER FEED MODE

where the available values are:

SETUP	FEED :		F1 (CFD)		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

F1 (CFD)	CFD Mode (Continuous Form Device). It must be selected for the continuous form paper.
F2 (DOD)	DOD Mode (Document On Demand). This value must be selected if you are using continuous form paper and want to use the tear feature. The tear feature causes the paper to be advanced of 2.5 inches when you press the key corresponding to TEAR - message in the F2 main or F2 ready display configuration
F3 (DID)	DID Mode (Document Insertion Device). It must be selected if you are using the single sheet paper.
F4 (ASF)	ASF Mode (Automatic Sheet Feeder).

BUZZER ACTIVATION

SETUP	BEEP :		ON		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

ON	The buzzer is enabled.
OFF	The buzzer is disabled

FF IN READY STATE

SETUP	ONLINE FF		:	DISABLE		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

where the available values are:

DISABLE No Form Feed in Ready state.

ENABLE Form Feed is enabled in Ready state.

RIBBON TYPE (Model TA2 and TA3 only)

SETUP	RIBBON		:	BLACK		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

BLACK Black ribbon

8 COLOR 8 colour process with Subtractive ribbon type

4 COLOR 4 colour primary with Accent ribbon type

CHARACTERS PER INCH (HORIZONTAL SPACING)

SETUP	CPI		:	10		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

10 10 cpi (characters per inch)

12 12 cpi

15 15 cpi

16.7 16.7 cpi

MAXIMUM PRINT POSITION

SETUP	MPP : 132				DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

1	1
.....	....
132	132 is maximum at 10 cpi
....	....
158	158 is maximum at 12 cpi
.....	....
198	198 is maximum at 15 cpi
.....	....
220	220 is maximum at 16.7 cpi

LINES PER INCH (VERTICAL SPACING)

SETUP	LPI : 6				DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

6	6 lpi (lines per inch)
8	8 lpi

MAXIMUM PRINT LINES

SETUP	MPL : 66				DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

1	One line
....	....
660	660 lines is maximum at 6 lpi
....	....
880	880 lines is maximum at 8 lpi

PRINT QUALITY

SETUP	QUALITY		:	FAST & DP		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

FAST & DP	Draft printing
TEXT	Draft text (fast printing)
NLQ	Near Letter Quality

PAGE - PRINTABLE AREA (Model TA2 and TA3 only)

SETUP	PAGE		:	FULL		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

FULL	Full Printable Area. The top margin is defined by TOP MARGN value (non-4224 mode)
PARTIAL	Partial Printable Area. The top margin is defined by TOP MARGN value plus an additional non printable area of 1/2 inch at the top of the page (4224 mode).

LEFT MARGIN

SETUP	LFT MARGN		:	0		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

☞ *The left margin value is defined in 1/50 inch units.*

The available values are:

0	No left margin
50/50"	1 inch

TOP MARGIN

SETUP	TOP MARGN		:	12/72"		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

☞ *The top margin value is defined in 1/72 inch units. The top margin will affect the loading position of single sheet only (MSF or ASF).*

The available values are:

9/72"	9/72 inch (1/8 inch)
360/72"	60/72 inch (5 inches)

PRINTING PERFORMANCE (Model TA2 and TA3 only)

SETUP	PERFORMAN		:	000 BC GR		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

000 BC GR	High resolution for bar code and graphics
001 BC gr	High resolution for bar code and low resolution for graphics
002 bc GR	Low resolution for bar code and high resolution for graphics
003 bc gr	Low resolution for bar code and graphics
004 HOST	The resolution type is selected by host

☞ *Please, note that upper-case letters (e.g. BC, GR) stand for high quality, while lower-case letters (e.g. bc, gr) stand for low quality.*

TEXT PRINTING MODE

SETUP	TXT-PRINT		:	BIDIR	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

BIDIR Bidirectional printing

UNIDIR Monodirectional printing

☞ ***The bidirectional printing is faster than monodirectional printing; nevertheless, the print quality will be better in monodirectional printing.***

GRAPHICS PRINTING MODE (Model TA2 and TA3 only)

SETUP	GRA-PRINT		:	BIDIR	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

BIDIR Bidirectional printing

UNIDIR Monodirectional printing

☞ ***The bidirectional printing is faster than monodirectional printing; nevertheless, the print quality will be better in monodirectional printing.***

BAR CODE PRINTING MODE (Model TA2 and TA3 only)

SETUP	B.C-PRINT		:	BIDIR	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

BIDIR Bidirectional printing

UNIDIR Monodirectional printing

☞ ***The bidirectional printing is faster than monodirectional printing; nevertheless, the print quality will be better in monodirectional printing.***

DOCUMENT ON DEMAND (DOD) EJECTION MODE

SETUP	DOD-EJECT		: IMMEDIATE		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

IMMEDIATE When you press the key corresponding to TEAR ↑ message, immediate paper ejection occurs.

DEL'D EOF When you press the key corresponding to TEAR ↑ message, it will turn into TEAR * and paper ejection will be performed as soon as the page will be fully printed.

DOCUMENT INSERTION DEVICE (DID) EJECTION MODE

SETUP	DID-EJECT		: TOF=TM		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

TOF=TM After performing an immediate DID paper ejection type, the next form will be fed to the first printable line.

AUTO TOF After performing an immediate DID paper ejection type, the next form will be fed to the first printable line if no data is present in the buffer; otherwise, the next form will be fed to the current vertical printing position.

LABELS (with Bottom Feed installed)

SETUP	LABELS		: NO		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

NO No paper with label should be loaded.

YES Paper with label can be loaded.

☞ ***When LABELS is selected to YES, no backwards paper movement will be allowed to prevent labels from leaving the support and sticking into the printer.***

QUICK FUNCTION

SETUP	QUICK-RDY :		YES		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

YES Quick function is enabled. The printer goes automatically ready to print after paper loading.

NO Quick function is disabled. The printer will remain offline after manual single sheet loading.

AUTOMATIC SHEET FEEDER TYPE SELECTION (with ASF installed)

SETUP	ASF TYPE :		SNGL BIN		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

SNGL BIN Single Bin ASF model

DUAL BIN Dual Bin ASF model

AUTOMATIC SHEET FEEDER SELECTION (with ASF installed)

SETUP	ASF SELEC :		VIA HOST		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

VIA HOST The single sheet will be loaded from bin selected by host

DEFLT BIN The single sheet will be loaded from default bin

BIN LINKING OPTION (with ASF installed)

SETUP	BIN LINK :		NO		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

NO The bin linking option is not enabled. When the selected bin goes out of paper, an error condition occurs.

YES The bin linking option is enabled. When the selected bi goes out of paper, the paper will be loaded from the other bin.

DEFAULT BIN (with ASF installed)

In F1, F2 or F3 mode:

SETUP	DEFLT BIN :		BIN 1		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

BIN 1 The bin 1 is selected.

BIN 2 The bin 2 is selected.

In F4 mode:

SETUP	DEFLT BIN :		MANUAL		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

MANUAL The Manual Sheet Feed is selected.

BIN 1 The bin 1 is selected.

BIN 2 The bin 2 is selected.

TRANSPARENT MODE (with ASF installed)

SETUP	TRANSPRNT		:	DISABLE		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

DISABLE The Transparent Mode is disabled

ENABLE The Transparent Mode is enabled

OPENING AND CLOSING CHARACTERS (with ASF installed)

SETUP	TRANS SEQ		:	1.ST		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

.	Full Stop character
+	Plus character
&	Ampersand character
*	Asterisk character
-	Dash character
/	Slash character
,	Comma character
%	Percent character
_	Underscore character
>	Greater Than character
'	Apotrophe character
=	Equal character

and then:

SETUP	TRANS SEQ		:	2.ND		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

.	Full Stop character
+	Plus character
&	Ampersand character
*	Asterisk character
-	Dash character
/	Slash character
,	Comma character
%	Percent character
_	Underscore character
>	Greater Than character
'	Apostrophe character
=	Equal character

DEFAULT BIN FOR BIN3 (with ASF installed)

SETUP	ASF3REDIR		:	ASF3BIN1		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

ASF3BIN1	Bin 3 is defaulted to Bin 1
ASF3BIN2	Bin 3 is defaulted to Bin 2. The Dual Bin ASF model should be installed and selected (DUAL BIN value of ASF TYPE item)
ASF3MANU	Bin 3 is defaulted to Manual Entry Slot.

☞ *Refer to Appendix A for further information.*

If the printer is in ASCII mode, the display configurations will be the following:

EMULATION MODE

SETUP	EMULATION		:	PROPRINTER		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

where the available values are:

PROPRINTER The IBM Proprinter III-XL emulation is enabled.

EPSON The EPSON EX-1000 emulation is enabled

CHARACTER SET SELECTION

In IBM Proprinter III XL emulation:

SETUP	CHAR. SET		:	CS2		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

where the available values are:

CS2 Character Set 2

CSI Character Set 1

In EPSON EX-1000 emulation:

SETUP	CHAR. SET		:	CS2		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

where the available values are:

CS2 Character Set 2

CSI Character Set 1

SLANT Slanted Character Set

NATION CHARACTER SET SELECTION

In IBM Proprinter III XL emulation:

SETUP	NATION		: CP 437		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

where the available values are:

CP 437	Nation Code 437
CP 850	Nation Code 850
CP 852	Nation Code 852
CP 860	Nation Code 860
CP 863	Nation Code 863
CP 865	Nation Code 865
LATIN 1	ISO 8859/1
LATIN 2	ISO 8859/2

In EPSON EX-1000 emulation:

SETUP	NATION		: USA		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

where the available values are:

USA	Usa
FRANCE	French Character Set
GERMANY	German Character Set
UK	English Character Set
DENMARK-1	Danish Character Set
SWEDEN	Swedish Character Set
ITALY	Italian Character Set
SPAIN-1	Spanish 1 Character Set

JAPAN	Japanese Character Set
NORWAY	Norwegian Character Set
DENMARK-2	Danish 2 Character Set
SPAIN-2	Spanish 2 Character Set
LATIN AMER.	Latin-American Character Set
LATIN 1	ISO 8859/1
LATIN 2	ISO 8859/2

PAPER FEED MODE

SETUP	FEED		:	F1 (CFD)		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

where the available values are:

F1 (CFD)	CFD Mode (Continuous Form Device). It must be selected for the continuous form paper.
F2 (DOD)	DOD Mode (Document On Demand). This value must be selected if you are using continuous form paper and want to use thetear feature. The tear feature causes the paper to be advanced of 2.5 inches when you press the key corresponding to TEAR ↑ message in the F2 main or F2 ready display configuration
F3 (DID)	DID Mode (Document Insertion Device). It must be selected if you are using the single sheet paper.
F4 (ASF)	ASF Mode (Automatic Sheet Feeder).

BUZZER ACTIVATION

SETUP	BEEP		:	ON		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

ON	The buzzer is enabled.
OFF	The buzzer is disabled

FF IN READY STATE

SETUP	ONLINE FF		:	DISABLE		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

where the available values are:

DISABLE No Form Feed in Ready state.

ENABLE Form Feed is enabled in Ready state.

RIBBON TYPE

SETUP	RIBBON		:	BLACK		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

BLACK Black ribbon

8 COLOR 8 colour process with Subtractive ribbon type

CHARACTERS PER INCH (HORIZONTAL SPACING)

SETUP	CPI		:	10		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

10 10 cpi (characters per inch)

12 12 cpi

15 15 cpi

17.1 17.1 cpi

20 20 cpi

MAXIMUM PRINT POSITION

SETUP	MPP		:	136	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

1	1
....	.....
136	136 is maximum at 10 cpi
....	....
163	163 is maximum at 12 cpi
....	.....
204	198 is maximum at 15 cpi
.....	....
233	233 is maximum at 17.1 cpi
.....	.....
272	272 is maximum at 20 cpi

LINES PER INCH (VERTICAL SPACING)

SETUP	LPI		:	6	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

6	6 lpi (lines per inch)
8	8 lpi

MAXIMUM PRINT LINES

SETUP	MPL		:	66	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

1	One line
....	....
660	660 lines is maximum at 6 lpi
....	....
880	880 lines is maximum at 8 lpi

PRINT QUALITY

SETUP	QUALITY		:	FAST & DP	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

FAST & DP	Draft printing
NLQ	Near Letter Quality

NLQ FONT SELECTION

SETUP	NLQ FONT		:	COURIER	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

COURIER	Courier font
OCR-B	OCR-B font
OCR-A	OCR-A font

LEFT MARGIN

SETUP	LFT MARGN		:	0	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

☞ ***The left margin value is defined in 1/50 inch units.***

The available values are:

0	No left margin
....	....
50/50"	1 inch

TOP MARGIN

SETUP	TOP MARGN		:	12/72"	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

☞ ***The top margin value is defined in 1/72 inch units. The top margin will affect the loading position of single sheet only (MSF or ASF).***

The available values are:

9/72"	9/72 inch (1/8 inch)
....	....
360/72"	360/72 inch (5 inches)

SKIP OVER FUNCTION

SETUP	SKIPOVER		:	0	DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

☞ ***The skip over is defined in number of lines at current vertical spacing -lpi.***

The available values are:

0	0
....	....
127	127

TEXT PRINTING MODE

SETUP	TXT-PRINT		: BIDIR		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

BIDIR	Bidirectional printing
UNIDIR	Monodirectional printing

☞ ***The bidirectional printing is faster than monodirectional printing; nevertheless, the print quality will be better in monodirectional printing.***

GRAPHICS PRINTING MODE

SETUP	GRA-PRINT		: BIDIR		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

BIDIR	Bidirectional printing
UNIDIR	Monodirectional printing

☞ ***The bidirectional printing is faster than monodirectional printing; nevertheless, the print quality will be better in monodirectional printing.***

BAR CODE PRINTING MODE

SETUP	B.C-PRINT		:	BIDIR		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

BIDIR Bidirectional printing

UNIDIR Monodirectional printing

☞ ***The bidirectional printing is faster than monodirectional printing; nevertheless, the print quality will be better in monodirectional printing.***

LINE FEED ON CARRIAGE RETURN

SETUP	LF ON CR		:	NO		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

HOST The AUTOFEEDXT signal is cheked by the printer (only in EPSON emulation)

NO No LF on CR

YES LF on CR

CARRIAGE RETURN ON LINE FEED

SETUP	CR ON LF		:	NO		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

NO No CR on LF

YES CR on LF

SLASHED ZERO FUNCTION

SETUP	ZERO SLASH : NO				DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

NO Slashed Zero function is disabled

YES Slashed Zero function is enabled

COMPRESSED PRINTING

SETUP	HOST COMPR : 17.1 CPI				DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

17.1 CPI Compressed printing at 17.1 cpi

20 CPI Compressed printing at 20 cpi

DOCUMENT ON DEMAND (DOD) EJECTION MODE

SETUP	DOD-EJECT : IMMEDIATE				DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

IMMEDIATE When you press the key corresponding to TEAR ↑ message, immediate paper ejection occurs.

DEL'D EOF When you press the key corresponding to TEAR ↑ message, it will turn into TEAR * and paper ejection will be performed as soon as the page will be fully printed.

DOCUMENT INSERTION DEVICE (DID) EJECTION MODE

SETUP	DID-EJECT		:	TOF=TM		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

TOF=TM After performing an immediate DID paper ejection type, the next form will be fed to the first printable line.

AUTO TOF After performing an immediate DID paper ejection type, the next form will be fed to the first printable line if no data is present in the buffer; otherwise, the next form will be fed to the current vertical printing position.

LABELS (with Bottom Feed installed)

SETUP	LABELS		:	NO		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

NO No paper with label should be loaded.

YES Paper with label can be loaded.

☞ ***When LABELS is selected to YES, no backwards paper movement will be allowed to prevent labels from leaving the support and sticking into the printer.***

AUTOMATIC SHEET FEEDER TYPE SELECTION (with ASF installed)

SETUP	ASF TY		:	SNGL BIN		DFLT
EXIT	UP	DOWN		UP	DOWN	MFG

The available values are:

SNGL BIN Single Bin ASF model

DUAL BIN Dual Bin ASF model

BIN LINKING FUNCTION

SETUP	BIN LINK		: NO		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

NO	Bin linking function is disabled
YES	Bin linking function is enabled

DEFAULT BIN (with ASF installed)

In F1, F2 or F3 mode:

SETUP	DFLT BIN		: BIN 1		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

the available values are:

BIN 1	The bin 1 is selected.
BIN 2	The bin 2 is selected.

In F4 mode:

SETUP	DFLT BIN		: MANUAL		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

the available values are:

MANUAL	The Manual Sheet Feed is selected.
BIN 1	The bin 1 is selected.
BIN 2	The bin 2 is selected.

DEFAULT BIN FOR BIN3 (with ASF installed)

SETUP	ASF3REDI		: ASF3BIN1		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

ASF3BIN1 Bin 3 is defaulted to Bin 1

ASF3BIN2 Bin 3 is defaulted to Bin 2. The Dual Bin ASF model should be installed and selected (DUAL BIN value of ASF TYPE item)

ASF3MANU Bin 3 is defaulted to Manual Entry Slot.

QUICK FUNCTION

SETUP	QUICK-RDY		: YES		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

YES Quick function is enabled. The printer goes automatically ready to print after paper loading.

NO Quick function is disabled. The printer will remain offline after manual single sheet loading.

PANEL LANGUAGE SELECTION

SETUP	PANEL LANG		: USA-UK		DFLT
EXIT	UP	DOWN	UP	DOWN	MFG

The available values are:

USA-UK English.

DEUTCH German

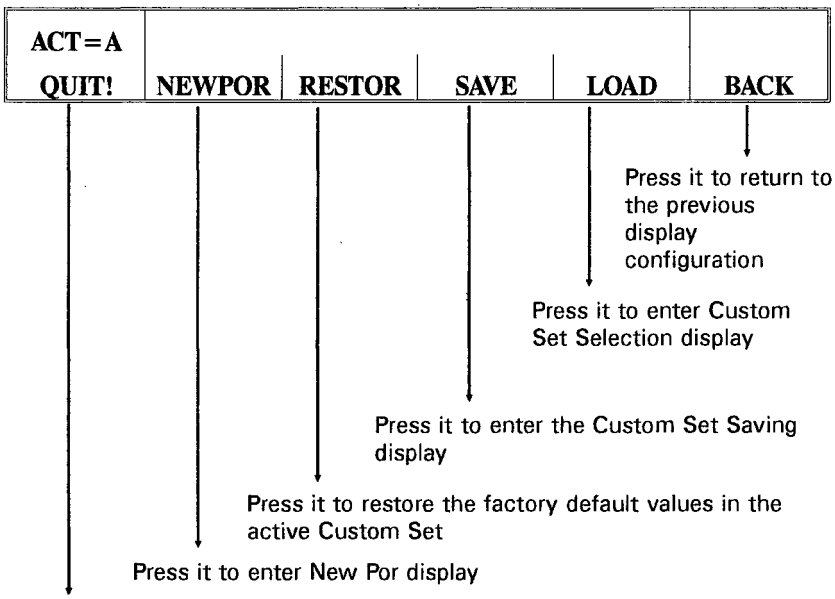
FRANCE French

ITALIA Italian

ESPANA Spanish

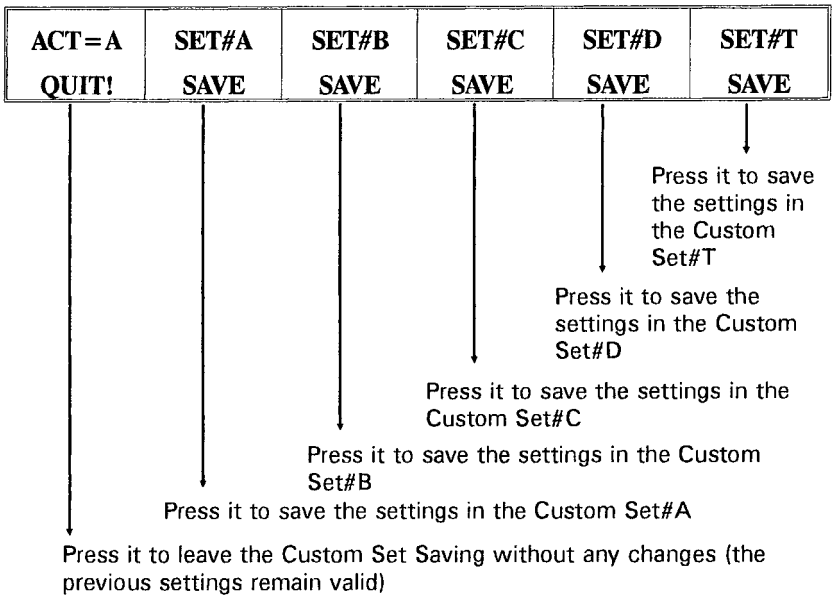
At this point, you can leave the Configuration Setup procedure by pressing he key corresponding to the SETUP EXIT message. The display will show the following display configuration:

Active Custom Set ("A "is the default)


ACT=A
QUIT!
NEWPOR
RESTOR
SAVE
LOAD
BACK
Press it to return to the previous display configuration
Press it to enter Custom Set Selection display
Press it to enter the Custom Set Saving display
Press it to restore the factory default values in the active Custom Set
Press it to enter New Por display
Press it to leave the Configuration Set procedure without any changes (the previous settings remain valid)

If you want to save your new settings before leaving the Configuration Setup procedure, press the key corresponding to the SAVE message, the Custom Set Saving is entered. The display will show:

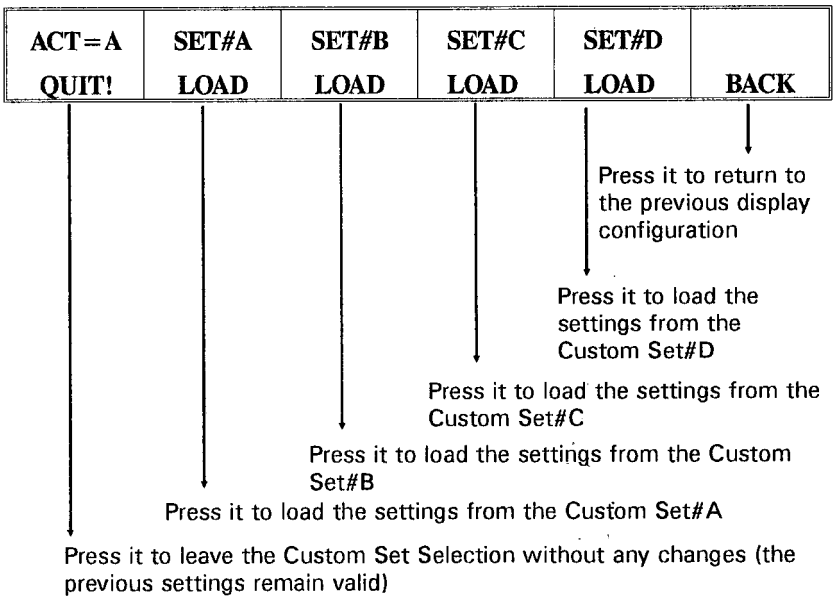
Custom Set Saving


ACT=A
QUIT!
SET#A
SAVE
SET#B
SAVE
SET#C
SAVE
SET#D
SAVE
SET#T
SAVE
Press it to save the settings in the Custom Set#T
Press it to save the settings in the Custom Set#D
Press it to save the settings in the Custom Set#C
Press it to save the settings in the Custom Set#B
Press it to save the settings in the Custom Set#A
Press it to leave the Custom Set Saving without any changes (the previous settings remain valid)

The CUSTOM SET # x SAVED message will appear when the settings have been saved.

If you press the key corresponding to the LOAD message the Custom Set Selection is entered and the display will show:

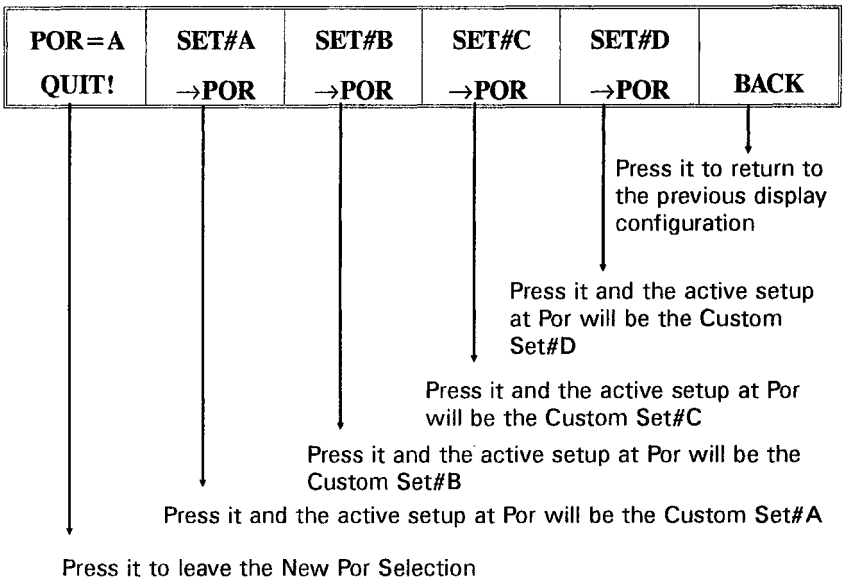
Custom Set Selection


ACT=A
QUIT!
SET#A
LOAD
SET#B
LOAD
SET#C
LOAD
SET#D
LOAD
BACK
Press it to return to the previous display configuration
Press it to load the settings from the Custom Set#D
Press it to load the settings from the Custom Set#C
Press it to load the settings from the Custom Set#B
Press it to load the settings from the Custom Set#A
Press it to leave the Custom Set Selection without any changes (the previous settings remain valid)

The CUSTOM SET # x LOADED message will appear when the settings have been loaded.

If you press the key corresponding to the NEWPOR message the New Por Selection is entered and the display will show:

New Por Selection


POR=A
QUIT!
SET#A
→POR
SET#B
→POR
SET#C
→POR
SET#D
→POR
BACK
Press it to return to the previous display configuration
Press it and the active setup at Por will be the Custom Set#D
Press it and the active setup at Por will be the Custom Set#C
Press it and the active setup at Por will be the Custom Set#B
Press it and the active setup at Por will be the Custom Set#A
Press it to leave the New Por Selection

The NEW POR SAVED message will appear when the new setup at Por is saved.

Day by Day Operations

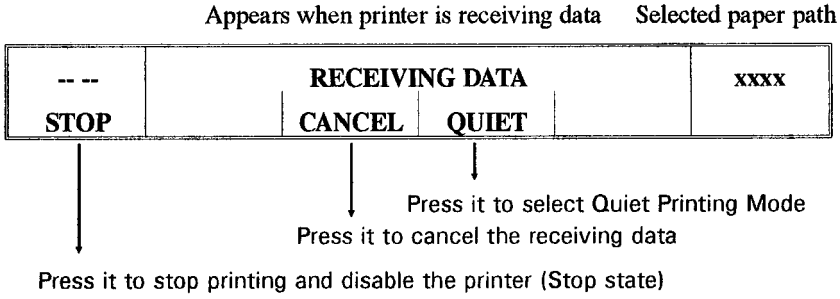
The following explanation will be helpful to perform the printer functions necessary in your daily job. Each function is described in a separate section so that you can refer to it quickly and easily:

- *switching from Ready to Stop state*
- *selecting the paper feed mode*
- *changing the paper path*
- *performing the tear off function*
- *performing the hex-dump printing mode*

Switching From Ready to Stop State

Your printer is in Ready state when it is enabled to print so that it will start to print as soon as it is receiving data.

In Ready state, the display shows:



The display shows:

00	CURRENT PATH: xxxx				CONFIG
START	FORM ↑	LINE ↑	P.ALGN		& TEST

Press it to put printer ready to print (Ready state)

When your printer is disabled to print, you can:

- *advance paper to the next form pressing the key corresponding to the FORM ↑ message*
- *advance paper one line at the current vertical spacing pressing the key*
- *corresponding to the LINE ↑ message*
- *enter the Paper Alignment display pressing the key corresponding to the P.ALGN message*
- *enter the Configuration Setup and Test displays pressing the key corresponding to the CONFIG & TEST message.*

Selecting the Paper Feed Mode

You can select the paper feed mode either via Configuration Setup procedure or in Normal Operation mode. The F1 mode (Continuous Form Device -CFD) is the default paper feed mode and you can change it when, after initialization tests, the display shows:

00	F1	REAR	PATH		CONFIG
	FEED	LOAD	SELECT		& TEST

Press it to change the paper path (see later in this chapter)

Press it to load paper from the selected path

Press it to display the available paper feed mode

The available paper feed modes are:

F1	Continuous Form Device - CFD
F2	Document On Demand Device - DOD

F3 Document Insertion Device - DID

F4 Automatic Sheet Feeder - ASF (*)

(*) the F4 mode can be selected only if no paper is present in any path and ASF has been installed.

Changing the Paper Path

The paper path value can be selected in Normal Operation Mode. The available selections for the paper path are:

REAR allows the fanfold paper loading from the rear entry slot. In F4 mode, the REAR path is not available.

BOTTOM allows the fanfold paper loading from the bottom entry slot. The Bottom Feed Tractors must be previously installed and connected. In F4 mode, the BOTTOM path is not available.

MSF allows the manual single sheet loading from the front entry slot. In F4 mode, the MSF path is not available.

ASF# allows the single sheet loading from the Automatic Sheet Feeder (single or dual bin model). The Automatic Sheet Feeder (ASF) must be previously installed and connected.

You can select a new paper path either after turning the printer on or after parking or ejecting paper.

When you turn the printer on, the paper path value, stored in NVM, will be activated in accordance with the printer configuration. See the following table that shows you how the NVM paper path value is adapted to the printer configuration:

NVM Paper Path	ASF	Bottom Feed Tractors	No Option
REAR	REAR	REAR	REAR
BOTTOM	ASF#(*)	BOTTOM	REAR(*)
MSF	MSF	MSF	MSF
ASF#	ASF#	BOTTOM(*)	REAR(*)

(*) the paper path value is adapted to the printer configuration.

The paper path value, result of the previous check, is also adapted to the path condition (paper or no paper condition) at power on. See the following table that shows you how the path value changes in accordance with the paper condition:

Paper Path	No Paper	Rear Paper	Bottom/Single Sheet Paper	Rear & Bottom Single Sheet Paper
REAR	REAR	REAR	Eject & MSF	Eject & REAR
BOTTOM	BOTTOM	REAR(*)	BOTTOM	Eject & REAR
MSF	MSF	REAR(*)	Eject & MSF	Eject & REAR
ASF#	ASF#	REAR(*)	Ejet & ASF	Eject & REAR

(*) the paper path value is adapted to the paper condition.

Whenever the NVM feed mode and/or paper path value has been modified, the display shows:

EXIT	**FEED AND/OR PATH CHANGED**	

↓

Press it to leave the display and enter the Normal Operation Mode

When you turn the printer on, the printer performs the Basic Assurance Tests, then the display shows:

A0	**ACTIVE PRINTER ADDRESS**
SET#A	**CUSTOM SET LOADED AT POR**

that informs you about the printer address ("0" is the default) and the active setup setting ("Set A" is the deafult). Do not press any function key; in fact, the display will be changed automatically after few seconds into the next display configuration, if no paper is present in any paper path:

00	**F1**	**REAR**	**PATH**		**CONFIG**
	FEED	**LOAD**	**SELECT**		**& TEST**

↓ ↓

Press it to change the paper path

Press it to load paper from the selected path

then, you can proceed with the paper loading procedure.

If you need to change the current path and there is fanfold paper in the printer, park it (see "Parking the Fanfold Paper" in Chapter 4) and then press the key corresponding to the PATH SELECT message.

If you need to change the current path and there is single sheet present in the printer, make sure that the printer is disabled to print (Stop state). The display will show:

00	CURRENT PATH: MSF xxxx			MSF	CONFIG
START	EJECT	LINE ↑	P.ALGN	DF-BIN	& TEST

Press the key corresponding to the P.ALGN message to enter the Paper Alignment display. You should see:

00	PAPER KNOB		SET	PAPER	CONFIG
EXIT	UP	DOWN	TOF	CHANGE	& TEST

Press the key corresponding to the PAPER CHANGE message and the display shows:

00	PLEASE CONFIRM	PAPER	
EXIT		CHANGE	

Press it to confirm the Paper Change operation

Press it to leave the display and enter the Stop state

Press the key corresponding to the PAPER CHANGE message to confirm and the display, that allows to change the paper path, will appear:

00	F1	MSF	PATH	YES	CONFIG
EXIT	FEED	LOAD	SELECT	QCKRDY	& TEST

Press it to change the paper path

Press it to leave the display and enter Stop state

Performing the Tear Off Function

The tear off function allows to advance fanfold paper so that it can be torn off at the perforation line. Then, the paper moves backwards and the printing can start at the first printable line.

The tear off function is available if the F2 paper feed mode has been previously selected via Configuration Setup procedure or in Normal Operation Mode. Make sure that the display shows:

00	**F2**	**REAR**	**PATH**		**CONFIG**
	FEED	**LOAD**	**SELECT**		**& TEST**

Load paper by pressing the key corresponding to the REAR LOAD message and then make sure that the display shows:

00	**CURRENT PATH: REAR**				**CONFIG**
START	**FORM ↑**	**LINE ↑**	**P.ALGN**	**TEAR ↑**	**& TEST**

If you selected IMMEDIATE in the DOD-EJECT function of the Configuration Setup procedure, press the key corresponding to the TEAR ↑ message and the paper will advance of 2.5 inches. The paper perforation will be aligned to the paper tear bar so that you can tear the paper along this perforation.

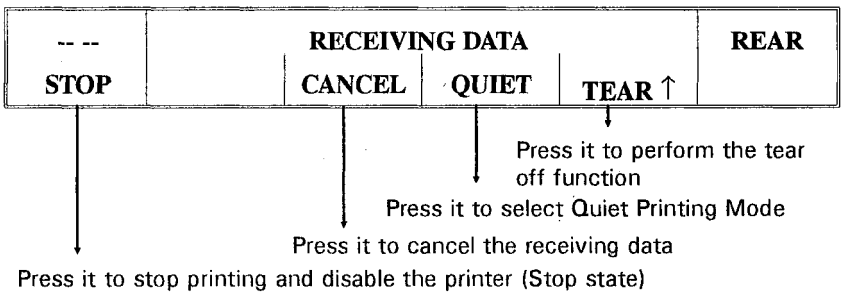
If you selected DEL'D EOF in the DOD-EJECT function of the Configuration Setup procedure, press the key corresponding to the TEAR ↑ message and it will turn into TEAR *. It means that the tear off function is delayed at the end of form. The paper will advance of 2.5 inches when the page will be fully printed.

The tear off function is not allowed (TEAR ↑ message does not appear) if the use of the label form paper has been selected in the Configuration Setup procedure (LABELS YES selection).

The display shows:

03	**DOC ON DEMAND EJECTED**		
EXIT		**TEAR ↓**	

Press the key corresponding to the TEAR ↓ message and the paper will move backwards at the first printable line. Press the key corresponding to the 00 START message to enable printer (Ready state). The display shows:


Appears when printer is receiving data
Selected paper path
-- --
STOP
RECEIVING DATA
CANCEL
QUIET
TEAR ↑
REAR
Press it to perform the tear off function
Press it to select Quiet Printing Mode
Press it to cancel the receiving data
Press it to stop printing and disable the printer (Stop state)

Performing the Hex-dump Printing Mode

The hex-dump mode allows the printing of the data received into the interface buffer in hexadecimal code. Make sure that the printer is disable to print (Stop state).

The display shows:

00	CURRENT PATH: xxxx				CONFIG
START	FORM ↑	LINE ↑	P.ALGN		& TEST

Enter the Configuration Setup and Test displays pressing the key corresponding to the CONFIG & TEST message.

The display shows:

00		I/F	TEST	HELP	CONFIG
EXIT	CANCEL	MENU	MENU	MENU	MENU

Press it to display the following Help Sub-Menu

Press it to leave the display and enter Stop state

00	CONFIG	CONFIG	OPERAT	MAINTN	BUFFER
EXIT	SHOW	PRINT	PRINT	PRINT	PRINT

Press it to start hexadecimal printing of the buffer contents

If paper has been already loaded, press the key corresponding to BUFFER PRINT message causes the printing to be started. Otherwise, the printer requires a paper loading operation and then starts to print. During the printing, the display shows:

Indicates the current path

26	BUFFER PRINT MODE ACTIVE			xxxx
STOP		CANCEL	QUIET	

Press it to select Quiet Printing Mode

Press it to cancel the receiving data

Press it to stop printing and disable the printer (Stop state)

The hex-dump printing mode produces the following printout (example), where:

PAGE X is the progressive page number

REPLY is the printer answer, if required.

Model TA1 hex-dump printing example in Twinax mode:

```
PAGE 1
0C                                                              -

2B C6 02 0C 2B D2 04 29 00 0A 2B D1 03 81 00 2B       ·F· ·K-----J-a··
C1 02 84 2B C2 02 42 2B C8 03 40 01                   A-d-B-B-H·· -

C1 C2 C3 C4 C5 C6 C7 C8 C9 D1 D2 D3 D4 D5 D6 D7       ABCDEFGHIJKLMNOP
D8 D9 E2 E3 E4 E5 E6 E7 E8 E9 40 40 40 40 40 40       QRSTUVWXYZ
40 40 40 F0 F1 F2 F3 F4 F5 F6 F7 F8 F9 40 40 40          0123456789
40 40 40 40 40 40 81 82 83 84 85 86 87 88 89 91             abcdefghij
92 93 94 95 96 97 98 99 A2 A3 A4 A5 A6 A7 A8 A9       klmnopqrstuvwxyz
40 40 40 40 40 40 40 40 40 4A 4B 4C 4D 4E 4F                  [.<(+!
50 5A 5B 5C 5D 5E 5F 60 61 6A 6B 6C 6D 6E 6F 79       &]$*);^-/|,%_>?`
7A 7B 7C 7D 7E 7F 9F A1 C0 D0 E0 40 40 40 40 40       :#@'="R~()\
40 40 40 40

C2 C3 C4 C5 C6 C7 C8 C9 D1 D2 D3 D4 D5 D6 D7 D8       BCDEFGHIJKLMNOPQ
D9 E2 E3 E4 E5 E6 E7 E8 E9 40 40 40 40 40 40 40       RSTUVWXYZ
40 40 F0 F1 F2 F3 F4 F5 F6 F7 F8 F9 40 40 40 40          0123456789
40 40 40 40 40 81 82 83 84 85 86 87 88 89 91 92             abcdefghijk
93 94 95 96 97 98 99 A2 A3 A4 A5 A6 A7 A8 A9 40       lmnopqrstuvwxyz
40 40 40 40 40 40 40 40 4A 4B 4C 4D 4E 4F 50                  [.<(+!&
5A 5B 5C 5D 5E 5F 60 61 6A 6B 6C 6D 6E 6F 79 7A       ]$*);^-/|,%_>?`:
7B 7C 7D 7E 7F 9F A1 C0 D0 E0 40 40 40 40 40 40       #@'="R~()\
40 40 40 C1                                              A

C3 C4 C5 C6 C7 C8 C9 D1 D2 D3 D4 D5 D6 D7 D8 D9       CDEFGHIJKLMNOPQR
E2 E3 E4 E5 E6 E7 E8 E9 40 40 40 40 40 40 40 40       STUVWXYZ
40 F0 F1 F2 F3 F4 F5 F6 F7 F8 F9 40 40 40 40 40          0123456789
40 40 40 40 81 82 83 84 85 86 87 88 89 91 92 93             abcdefghijkl
94 95 96 97 98 99 A2 A3 A4 A5 A6 A7 A8 A9 40 40       mnopqrstuvwxyz
40 40 40 40 40 40 40 40 4A 4B 4C 4D 4E 4F 50 5A                [.<(+!&]
5B 5C 5D 5E 5F 60 61 6A 6B 6C 6D 6E 6F 79 7A 7B       $*);^-/|,%_>?`:#
7C 7D 7E 7F 9F A1 C0 D0 E0 40 40 40 40 40 40 40       @'="R~()\
40 40 C1 C2                                              AB

C4 C5 C6 C7 C8 C9 D1 D2 D3 D4 D5 D6 D7 D8 D9 E2       DEFGHIJKLMNOPQRS
E3 E4 E5 E6 E7 E8 E9 40 40 40 40 40 40 40 40 40       TUVWXYZ
F0 F1 F2 F3 F4 F5 F6 F7 F8 F9 40 40 40 40 40 40       0123456789
40 40 40 81 82 83 84 85 86 87 88 89 91 92 93 94          abcdefghijklm
95 96 97 98 99 A2 A3 A4 A5 A6 A7 A8 A9 40 40 40       nopqrstuvwxyz
40 40 40 40 40 40 40 4A 4B 4C 4D 4E 4F 50 5A 5B             [.<(+!&]$
5C 5D 5E 5F 60 61 6A 6B 6C 6D 6E 6F 79 7A 7B 7C       *);^-/|,%_>?`:#@
7D 7E 7F 9F A1 C0 D0 E0 40 40 40 40 40 40 40 40       '="R~()\
40 C1 C2 C3                                              ABC

C5 C6 C7 C8 C9 D1 D2 D3 D4 D5 D6 D7 D8 D9 E2 E3       EFGHIJKLMNOPQRST
E4 E5 E6 E7 E8 E9 40 40 40 40 40 40 40 40 F0          UVWXYZ          0
F1 F2 F3 F4 F5 F6 F7 F8 F9 40 40 40 40 40 40 40       123456789
40 40 81 82 83 84 85 86 87 88 89 91 92 93 94 95          abcdefghijklmn
96 97 98 99 A2 A3 A4 A5 A6 A7 A8 A9 40 40 40 40       opqrstuvwxyz
40 40 40 40 40 4A 4B 4C 4D 4E 4F 50 5A 5B 5C                [.<(+!&]$*
5D 5E 5F 60 61 6A 6B 6C 6D 6E 6F 79 7A 7B 7C 7D       );^-/|,%_>?`:#@'
7E 7F 9F A1 C0 D0 E0 40 40 40 40 40 40 40 40 40       ="R~()\
C1 C2 C3 C4                                              ABCD

C6 C7 C8 C9 D1 D2 D3 D4 D5 D6 D7 D8 D9 E2 E3 E4       FGHIJKLMNOPQRSTU
E5 E6 E7 E8 E9 40 40 40 40 40 40 40 40 F0 F1          VWXYZ          01
F2 F3 F4 F5 F6 F7 F8 F9 40 40 40 40 40 40 40 40       23456789
40 81 82 83 84 85 86 87 88 89 91 92 93 94 95 96          abcdefghijklmno
```

Model TA3 hex-dump printing example in Twinax mode:

```
PAGE 1
00 05 D6 97 00                                                  ---Ö--

00 09 D6 9F 00 04 01 C1 00                                       Ö--  -A

00 05 D6 97 00                                                  ---Ö--

00 05 D6 03 00                                                   -Ö--

00 05 D6 E4 00                                                  ---ÖÜ-

00 08 D6 33 00 F8 00 01                                         ---Ö---8--

00 0A D6 33 00 F6 00 E0 00 01                                   ---Ö---ö--\---

00 07 D6 6F 00 00 00                                            ---Ö?----

00 0F D6 6B 00 00 00 00 00 00 00 00 00 00 00                    ---Ö_-----------

00 30 D6 CF 00 00 00 38 40 38 40 00 00 4A 40 00                 ---ÖÏ-------- -  ---Ê -
00 00 F0 00 80 00 00 2B 00 44 C0 00 00 00 00 2B                 ---Ö---Ø--------à(----
00 00 00 00 A0 00 00 FF FF 00 00 00 F0 01 FF FF                 ----------µ-----  -----Ö--

00 07 D6 33 00 0A 00                                            ---Ö-----

00 15 D6 3F 00 01 00 01 00 00 FF FF FF FF 00 1A                 ---Ö?----------          ---
00 00 00 80 00                                                  -----Ø---

00 15 D6 3F 00 01 00 01 00 00 FF FF FF FF 00 1A                 ---Ö?----------          ---
00 00 00 80 00                                                  ----  -Ø--

00 08 D6 3F 00 15 00 00                                         ---Ö?-----

00 07 D6 5F 00 00 01                                            ---Ö^-----

00 3C D6 84 00 00 08 AC 6B 00 00 00 00 00 00 00                 ---Öd-----Ð,----------
00 10 A6 6B 00 38 40 FF FF FF FF 10 00 00 00 00                 ---¦,----              ---------
00 1C A6 BB 00 00 38 40 38 40 00 00 00 00 00 00                 ---¦»|-----  --  ----------
FF FF FF FF 00 00 00 00 00 00 00 00                             "  "  ------------

00 19 D6 85 00 70 0C 00 00 00 01 74 00 00 06 00                 ---Öe-p--  ----  -è---------
00 00 00 0A 07 18 07 71 00                                       ---------  -É--

00 25 D6 85 00 70 0C 00 00 00 02 74 00 00 12 00                 ---Öe-p---------è-- ----
00 00 00 0A 07 18 01 0A 01 C1 08 09 34 5F 09 51                 ------------A------^--é
2F 5F 09 71 00                                                  -^--É--

00 25 D6 85 00 70 0C 00 00 00 03 74 00 00 12 00                 ---Öe-p---------è---------
00 00 00 0A 01 18 02 0A 02 C1 08 09 34 59 22 51                 ------------A-----ß--é
2F 59 22 71 00                                                  -ß--É--

00 25 D6 85 00 70 0C 00 00 00 04 74 00 00 12 00                 ---Öe-p---------è---------
00 00 00 0A 02 18 04 0A 03 C1 08 09 34 53 3A 51                 ------------A-----ë--é
2F 53 3A 71 00                                                  --ë--É--

00 25 D6 85 00 70 0C 00 00 00 05 74 00 00 12 00                 --Öe-p---------è---  --
00 00 00 0A 03 18 03 0A 04 C1 08 09 34 4D 52 51                 ------------A-----(êé
2F 4D 52 71 00                                                  -(êÉ--

00 25 D6 85 00 70 0C 00 00 00 06 74 00 00 12 00                 ---Öe-p---------è---------
```

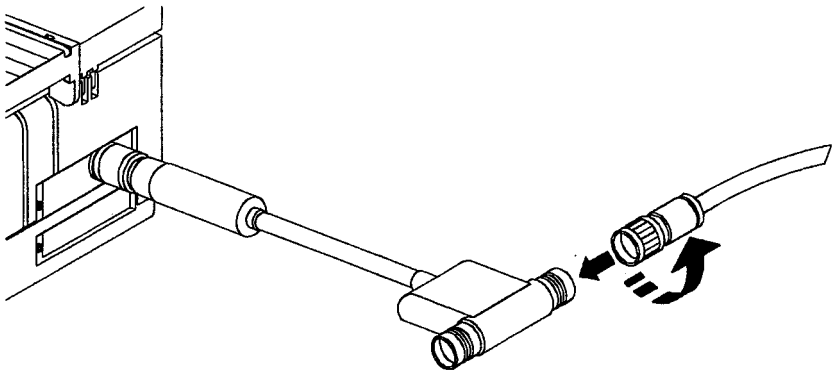
Connecting The Interface Cable

Your printer can be attached to the IBM System/36, AS/400 and to the IBM5294, 5394 and 5494 control units (Twinax connection).This printer can be also connected to a IBM or compatible PC (ASCII connection)Twinax Connection.

Twinax Connection

You must connect your printer using cables and connectors as parts of a daisy-chained line. The length of the daisy-chain must not exceed 1500 m (5000 ft).

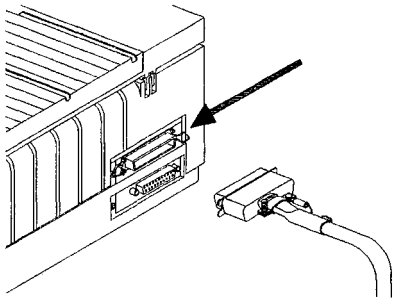
1. Align the groove of the interface connector with the pin on the T-cable connector, then plug the input cable into one of the two available input connectors of the T-cable. Turn clockwise the metal ring of the interface connector until it stops.



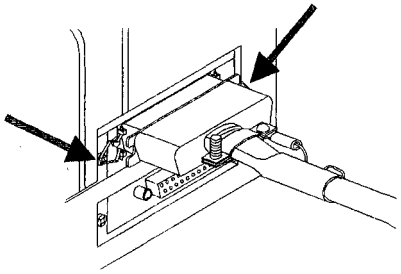
Parallel Connection

You must connect your printer using a parallel I/F connector. The length of the parallel interface printer cable must not exceed 15 meters (50 feet).

1. Insert the interface parallel cable into the parallel connector.



2. Use clips to ensure the cable.



Parallel Interface Technical Characteristics

Characteristics

The interface is an 8-bits per byte parallel TTL-compatible interface. It uses 7- or 8-bit data transfer code without parity check.

- ***Logic Level***
  TTL Level
- ***Synchronization System***
  By external $\overline{\text{STROBE}}$ pulse
- ***Handshaking***
  ACK and BUSY signal
- ***Printer Status***
  By control signals: SLCT, PE, BUSY, and $\overline{\text{ERROR}}$
- ***Drive Capability***
  Up to 15 feet (5 m) on AWG26 min. wire size of twisted conductors on TTL receiver. The maximum reachable distance depends also on the drive capability of the host and the noise level along the interface cable path.
- ***Buffer Size***
  The printer input buffer is selectable via operatot panel (BUFFER selection in the I/F Menu, in Section 3) It can assume one of the following sizes: 256 bytes, 2 Kbytes and 128 Kbytes.
- ***Printer Connector***
  Type AMPHENOL 57-40360-12-D56 or equivalent
- ***Cable Connector***
  AMPHENOL 57-30360-12 or equivalent

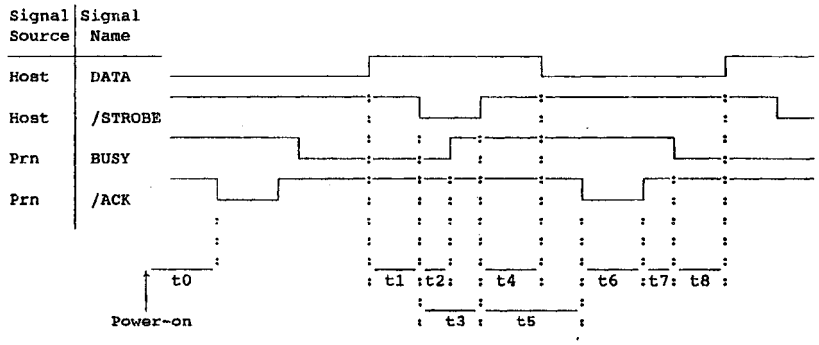
The interface pin assignment is described in the following table:

Signal Name	Pin Number		Source	Description
	Signal Wire	Return Wire		
STROBE	1	19	HOST	Clock signal which controls data transmission.
DATA BIT 1 DATA BIT 2 DATA BIT 3 DATABIT 4 DATA BIT 5 DATA BIT 6 DATA BIT 7 DATA BIT 8	2 3 4 5 6 7 8 9	20 21 22 23 24 25 26 27	HOST	Represents transmitted data; logical "1" is represented by HIGH level signal. DATA BIT 1 (pin 2) is the least significant bit.
ACK	10	28	PRT	Active LOW level signal. Indicates that data has been received and stored in the buffer.
BUSY	11	29	PRT	An active HIGH level signal which indicates that the printer cannot accept data.
PE	12	-	PRT	Active HIGH level. Indicates that a paper out (Paper Empty) condition has occurred.
SELECT	13	-	PRT	Active HIGH level. Indicates that the printer is ready to receive and print data.
AUTOFEEDXT	14	-	HOST	Active LOW level (EPSON mode only). Indicates an automatic LF after a CR.
NC	15	-	-	Not used.

Signal Name	Pin Number		Source	Description
	Signal Wire	Return Wire		
GND	-	16,33	-	Common ground signal.
CHASSIS GROUND	-	17	-	Frame ground.
NC	18	-	-	Not used
GND	30	-	-	Common ground signal
INIT	31	30	HOST	Active LOW level. Causes the printer to initialize.
ERROR	32	-	PRT	Active LOW level. Indicates that the printer is disabled because of a paper out condition or printer malfunction.
NC	33	-	-	Not used
NC	34	-	-	Not used.
+5VDC	35	-	PRT	Pulled up signal.(33 k ohm).
SELECTIN	36	-	HOST	Active HIGH level. Indicates that it is possible the data entry control. Internal set is determined by the SLCT IN function

Signal Timing

Each character transmitted to the printer must be clocked by a $\overline{\text{STROBE}}$ signal. When a $\overline{\text{STROBE}}$ is received, the printer sets the BUSY signal high to inform the host that the printer is no longer able to receive further data. An $\overline{\text{ACK}}$ pulse is sent and BUSY is dropped to inform the host that the character has been processed and that further data can be sent. When the printer is turned on, a High level BUSY signal is output through the interface until the printer becomes ready to accept data. An $\overline{\text{ACK}}$ pulse is always sent to the host at the end of the printer initialization before dropping the BUSY signal. The timing of the interface signals is shown in the following figure:



Timing:

0 = Printer Initialization

1 = 0.5 msec (min)

2 = 0 to 0.25 msec

3 = 0.5 msec (min)

4 = 0.5 msec (min)

5 = Max 1 msec for printable characters and control command, if input buffer is not full

6 = 0.5 msec (min) 6 msec (max)

7 = 0 to 0.25 msec

8 = 0.msec (min) PC dependent time

The timing refers to signals at printer interface connector level. The input signal rise and fall time must not exceed 0.2 msec.

Paper Handling

This chapter presents the necessary information for correct paper handling. It describes the specifications of the paper your should use. This will help you to choose the appropriate paper for your printer. Then, it describes the procedures for loading and removing paper. The technical information are described in separate subchapters, according to the paper type: whether it be fanfold paper or single sheet. The procedure to load a single sheet without removing the fanfold paper is described at the end of the chapter.

Fanfold Paper **4.2**
Choosing the Paper Type 4.2
Loading Fanfold Paper (Continuous Form and Document On Demand Operations) 4.3
Parking the Fanfold Paper 4.8

Single Sheet **4.11**
Choosing the Paper Type 4.11
Loading Single Sheet (Document Insertion Device Operation) 4.12

Switching from Fanfold Paper to Single Sheet **4.16**

Fanfold Paper

Choosing the Paper Type

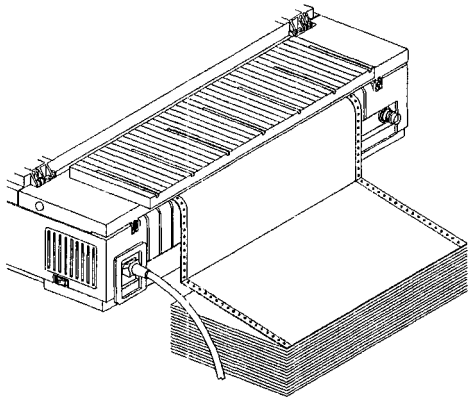
Use the correct paper in your printer. This is essential to obtain good result in your printout. See the table below:

Width		Minimum Maximum	76 mm (3 inches) 444 mm (17.5 inches)
Length		Minimum (between perforation)	76 mm (3 inches)
Weight		Minimum Maximum	55 g/m^2 80 g/m^2
Number of copies		1 original plus 5 copies	
Weight	First sheet	Minimum Maximum	55 g/m^2 75 g/m^2
	Others	Minimum Maximum	35 g/m^2 75 g/m^2
	Carbon	Minimum Maximum	14 g/m^2 35 g/m^2
Total thickness		Minimum Maximum	0.06 mm (0.002 inches) 0.52 mm (0.02 inches)

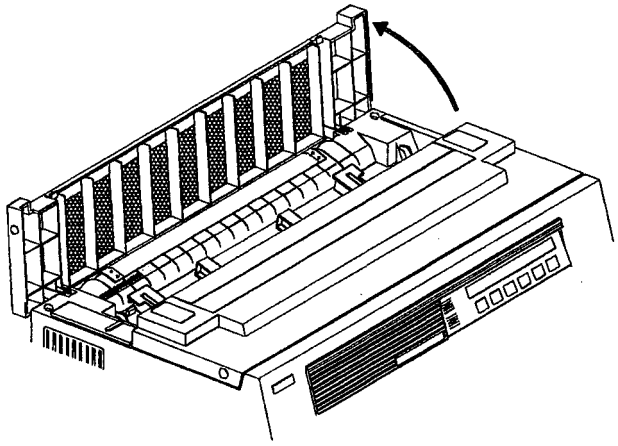
Loading Fanfold Paper (Continuous Form and Document On Demand Operations)

The fanfold paper must be inserted from the rear of the printer.

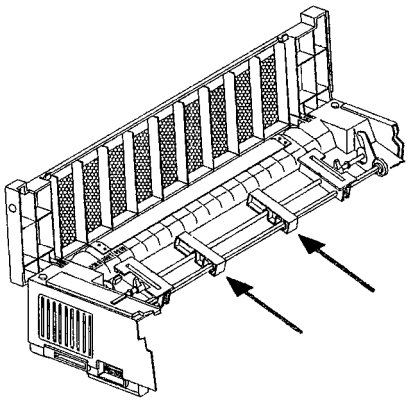
1. Feed the paper into the paper entry slot.



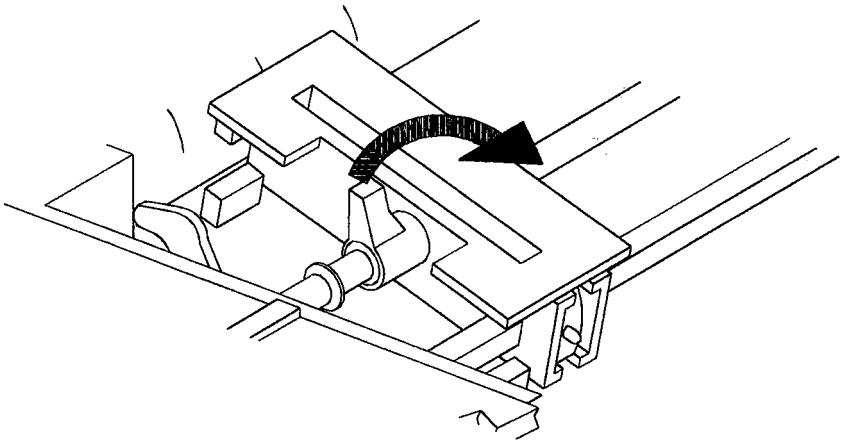
2. Raise the rear cover.



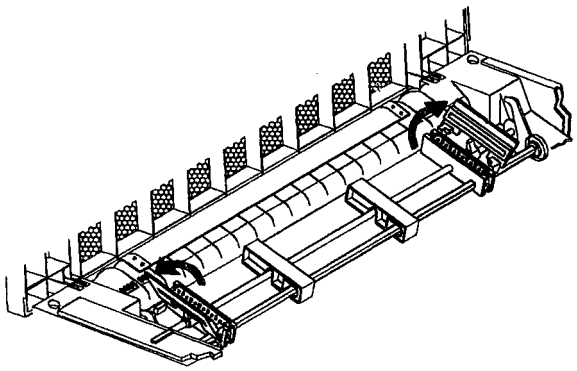
3. Move the spacers evenly along the tractor bar.



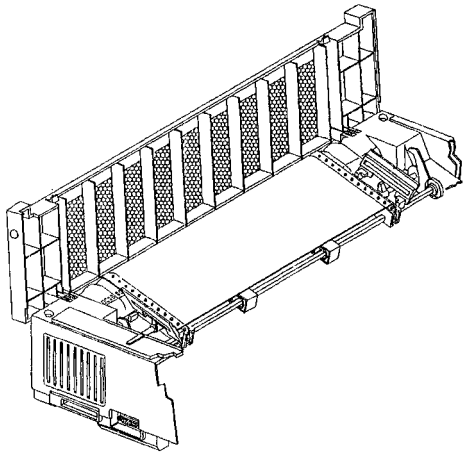
4. Unlock the left sprocket and slide it to the extreme left.



5. Lock the sprocket in place and open the cover.

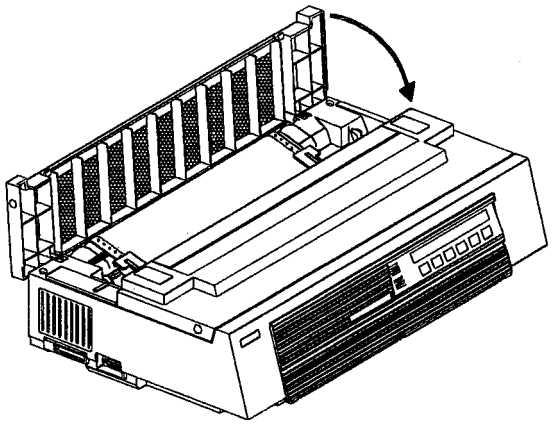


6. Position the holes of the paper over the sprocket and close the cover.

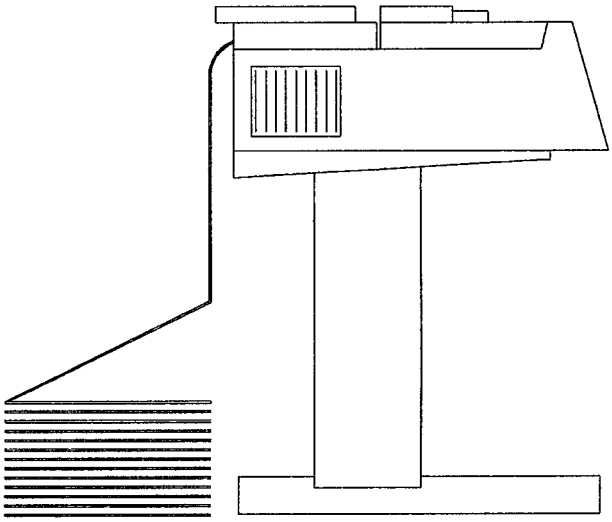


☞ ***Perform the same operations for the right sprocket, adjusting it to the paper width.***

7. Close the rear cover.



8. Position the stack of blank paper so that it feeds freely into the printer.



9. Turn the printer on. Make sure that all Basic Assurance Tests are performed. Finally, the display should show:

A0	**ACTIVE PRINTER ADDRESS**
SET#A	**CUSTOM SET LOADED AT POR**

that informs you about the printer address (the default printer address is "0") and on the printer setup enabled at power on (the default setup is A").

☞ ***The printer address can be changed via I/F Setup procedure (see Chapter 3).***

Do not press any function key. In fact, the display will be changed automatically after few seconds into the next display configuration:

00	**F1**	**REAR**	**PATH**		**CONFIG**
	FEED	**LOAD**	**SELECT**		**& TEST**

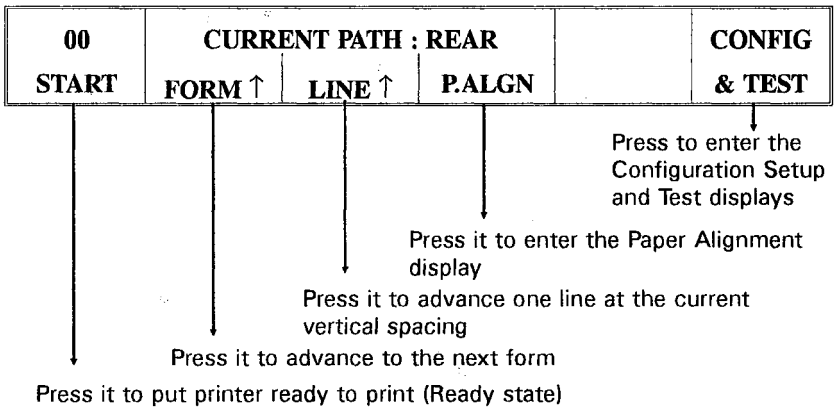
Press it to change the paper path

Press it to load fanfold from rear slot

Press it to change the paper feed mode

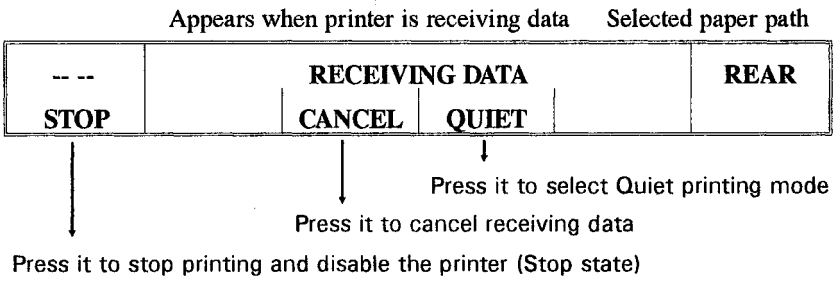
You can change the F1 mode into F2 by pressing the key corresponding to the F1 FEED message until F2 FEED will appear.

10. Press the key corresponding to REAR LOAD message and the paper will be fed to the first printable line (F1 mode). The display will show:


00
START
CURRENT PATH : REAR
FORM ↑
LINE ↑
P.ALGN
CONFIG
& TEST
Press to enter the Configuration Setup and Test displays
Press it to enter the Paper Alignment display
Press it to advance one line at the current vertical spacing
Press it to advance to the next form
Press it to put printer ready to print (Ready state)

If F2 mode has been selected, the tear off funtion becomes available. See "How Performing the Tear Off Function" in Chapter 3 for more details.

11. Press the key corresponding to the 00 START message to put printer ready to print. The display will show:

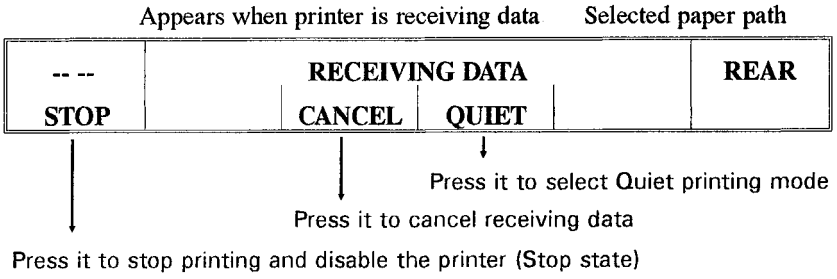


The loading procedure has now been completed. You are ready to print on fanfold paper. If any message appears on the display, refer to Appendix C where you will find the summary of all messages.

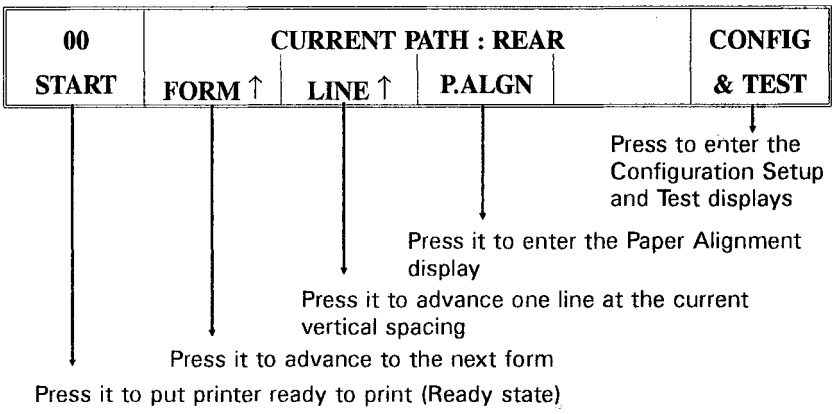
Parking the Fanfold Paper

Make sure that your printer is turned on. If you want to park and then remove the fanfold paper, follow this sequence:

1. Make sure that the selected path is REAR. The display shows:



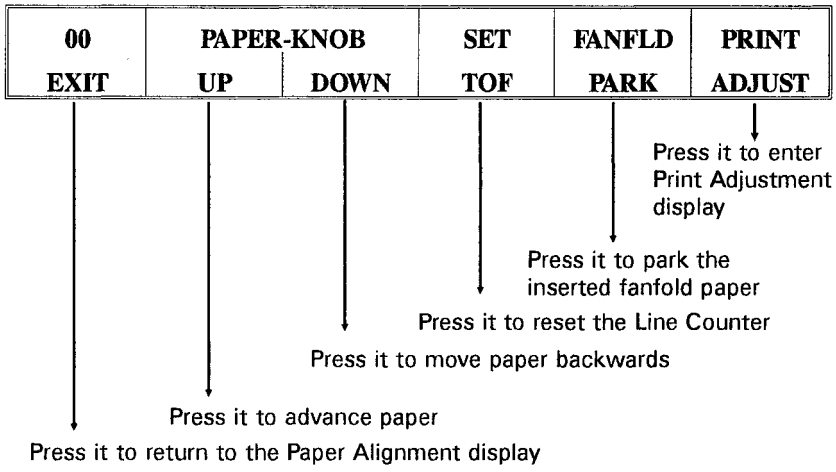
2. Press the key corresponding to the XX --/STOP message to disable the printer (Stop state). The display shows:


00
START
CURRENT PATH : REAR
FORM ↑
LINE ↑
P.ALGN
CONFIG
& TEST
Press to enter the Configuration Setup and Test displays
Press it to enter the Paper Alignment display
Press it to advance one line at the current vertical spacing
Press it to advance to the next form
Press it to put printer ready to print (Ready state)

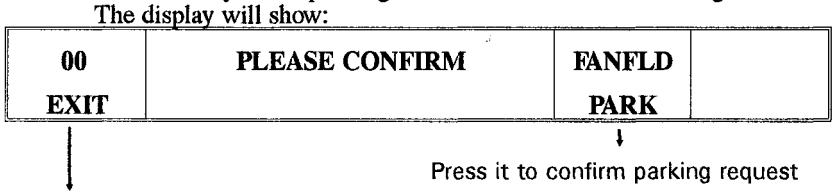
If F2 mode has been selected, the TEAR ↑ message appears to confirm that the tear off function is available. It can be performed whenever you press the key corresponding to the TEAR ↑ message.

3. Tear any fanfold paper loaded along the last perforation.

4. Press the key corresponding to the P.ALGN message to enter the Paper Alignment display. The display shows:



5. Press the key corresponding to the FANFLD PARK message. The display will show:



Press the key corresponding to the FANFLD PARK message and the fanfold paper moves backwards to its parking position, that is out from the paper feeding mechanism but still inserted into the tractors.

If you wish to remove the fanfold paper definitively from the tractors, proceed as follows:

- *Raise the rear cover.*
- *Open the left and the right sprocket covers.*
- *Lift out the paper from the sprockets.*
- *Close the sprocket covers and the rear cover.*

☞ ***It is not necessary to remove the fanfold paper from the tractors to load single sheet paper (see "Switching From Fanfold Paper to Single Sheet" later in this chapter).***

Single Sheet

Choosing the Paper Type

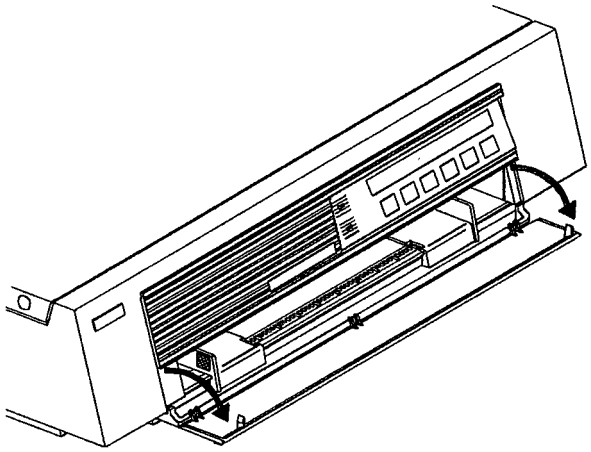
Use the correct paper in your printer. This is an essential to obtain a good result with your printout. See the table below:

Width		Minimum Maximum	76 mm (3 inches) 444 mm (17.5 inches)
Length		Minimum (between perforation)	76 mm (3 inches)
Weight		Minimum Maximum	55 g/m^2 80 g/m^2
Number of copies		1 original plus 5 copies	
Weight	First sheet	Minimum Maximum	55 g/m^2 75 g/m^2
	Others	Minimum Maximum	35 g/m^2 75 g/m^2
	Carbon	Minimum Maximum	14 g/m^2 35 g/m^2
Total thickness		Minimum Maximum	0.06 mm (0.002 inches) 0.52 mm (0.02 inches)

Loading Single Sheet (Document Insertion Device Operation)

The single sheets are inserted at the front of the printer. You can load a single sheet whether or not the fanfold paper is inserted. If you do not want to remove the fanfold paper, see "Switching From Fanfold Paper to Single Sheet" later in this chapter. If you have already removed fanfold paper or if you load single sheet for the first time, proceed as follows:

1. Open the front cover.



2. Turn the printer on. Make sure that all Basic Assurance Tests are performed. Finally, the display should show:

A0	**ACTIVE PRINTER ADDRESS**
SET#A	**CUSTOM SET LOADED AT POR**

that informs you about the printer address (the default printer address is "0") and on the printer setup enabled at power on (the default setup is "A").

☞ ***The printer address can be changed via I/F Setup procedure (in Chapter 3).***

Do not press any function key. In fact, the display will be changed automatically after few seconds into the next display configuration (factory default setting):

00	F1 FEED	REAR LOAD	PATH SELECT		CONFIG & TEST

Press it to change the paper path

Press it to load fanfold from rear slot

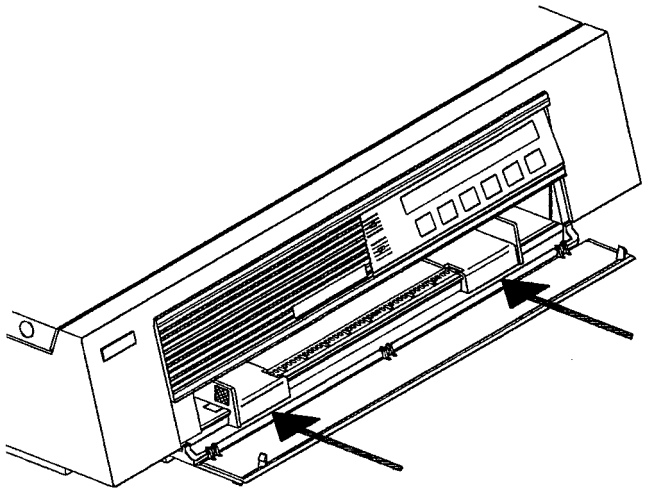
Press it to change the paper feed mode

The paper path must be set to MSF (Manual Sheet Feed) and the paper feed mode should be changed into F3 mode. However, if you have not selected the correct path, the printer automatically forces the right selection (see "Changing Paper Path" in Chapter 3).

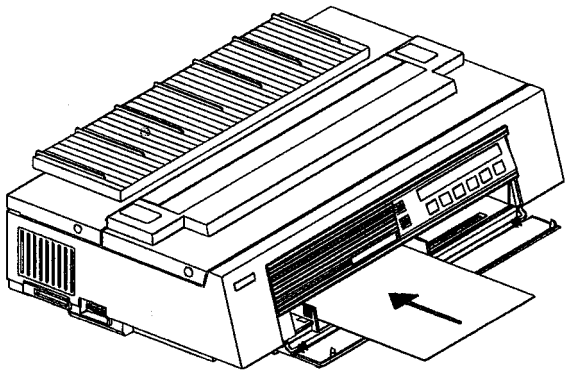
3. Press the key corresponding to the F1 FEED message until F3 FEED will appear and press the key corresponding to PATH SELECT message until MSF LOAD message will replace the REAR LOAD message on the left. Finally, the display should show:

00 START	F3 FEED	MSF LOAD	PATH SELECT	YES QCKRDY	CONFIG & TEST

4. Slide the left paper guide to the left as far as it will go and adjust the right paper guide according to the paper width.



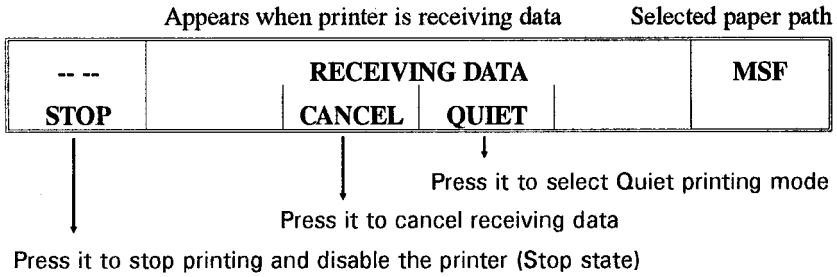
5. Insert a sheet of paper into the front paper entry slot and feed it until it stops.



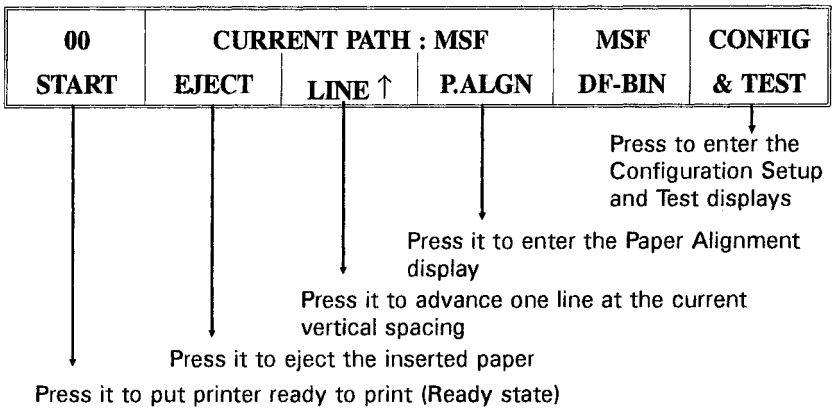
The paper will be fed to the first printable line.

☞ ***The printer enters automatically Ready state after paper loading according to the QUICK function setting (YES QCKRDY means that printer enters Ready state after paper loading; NO QCKRDY means that printer enters Stop state after paper loading.***

In Ready state (YES QCKRDY selected), the display will show:



In Stop state (NO QCKRDY selected), the display will show:


00
START
CURRENT PATH : MSF
EJECT
LINE ↑
P.ALGN
MSF
DF-BIN
CONFIG
& TEST
Press to enter the Configuration Setup and Test displays
Press it to enter the Paper Alignment display
Press it to advance one line at the current vertical spacing
Press it to eject the inserted paper
Press it to put printer ready to print (Ready state)

Press the key corresponding to `00 START` message to put printer ready to print (Ready state).

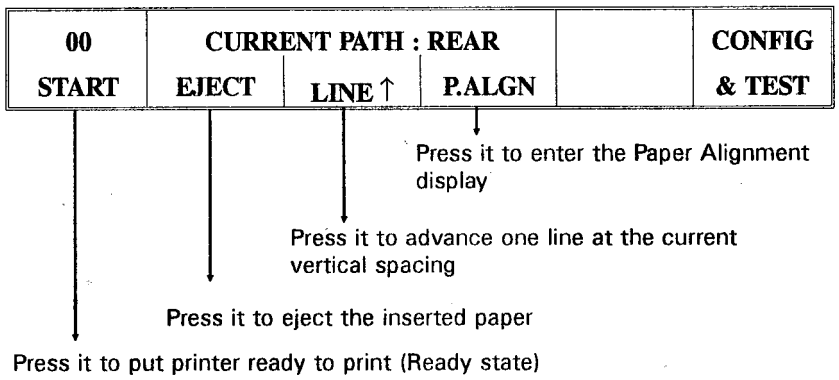
The loading procedure has now been completed. You are ready to print on single sheet paper.

If any message appears on the display, refer to Appendix C where you will find the summary of all messages.

Switching from Fanfold Paper to Single Sheet

If you are using fanfold paper and it needs to print on single sheet, proceed as follows:

1. Make sure that your printer is turned on and disabled to print (Stop state) by pressing the key corresponding to the READY/STOP message. The display should show:

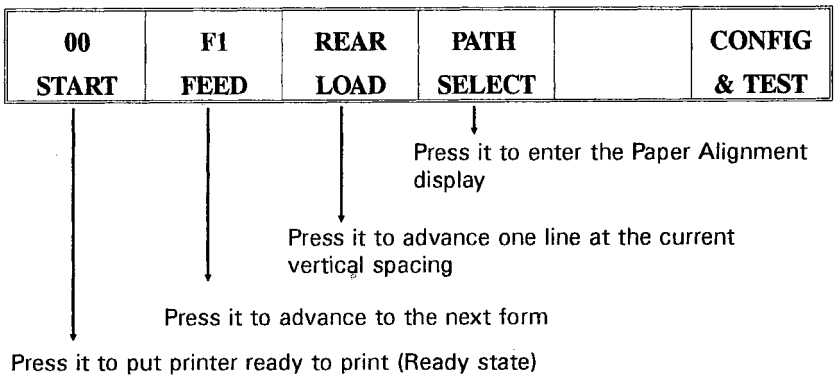

00
START
CURRENT PATH : REAR
EJECT
LINE ↑
P.ALGN
CONFIG
& TEST
Press it to enter the Paper Alignment display
Press it to advance one line at the current vertical spacing
Press it to eject the inserted paper
Press it to put printer ready to print (Ready state)

If F2 mode has been selected, the tear off function is available and the `TEAR ↑` message appears between `P.ALIGN` and `CONFIG & TEST` messages. Press the key corresponding to the `TEAR ↑` message to perform this function.

2. Tear the fanfold paper that is corrently loaded along the last perforation.

3. Park the fanfold paper as explained in "Parking the Fanfold Paper" before in this chapter.

4. Now, the printer is in no paper condition, so that the display shows:



The display indicates that the rear entry slot for the fanfold paper and the F1 mode are still selected.

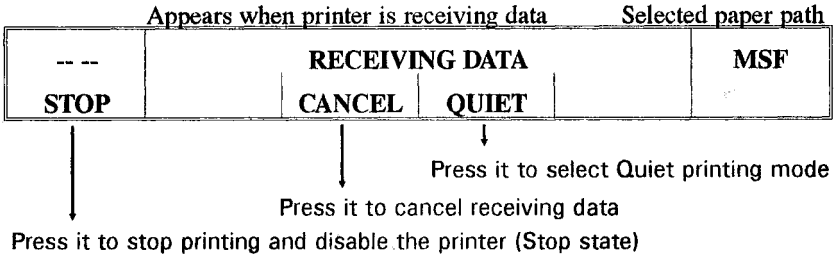
5. Proceed with the single sheet loading:

- *open the front cover*
- *slide the left paper guide to the left as far as it will go and adjust the right paper guide according to the paper width*
- *insert a sheet of paper into the front paper entry slot and feed it until it stops.*

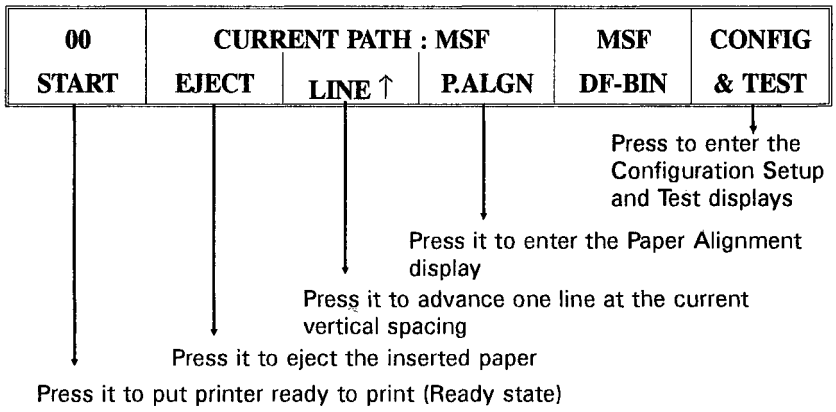
6. The single sheet will be fed to the first printable line.

☞ ***The printer enters automatically Ready state after paper loading according to the QUICK function setting (YES QCKRDY means that printer enters Ready state after paper loading; NO QCKRDY means thatprinter enters Stop state after paper loading.***

In Ready state (YES QCKRDY selected), the display will show:



In Stop state (NO QCKRDY selected), the display will show:


00
START
CURRENT PATH : MSF
EJECT
LINE ↑
P.ALGN
MSF
DF-BIN
CONFIG
& TEST
Press to enter the Configuration Setup and Test displays
Press it to enter the Paper Alignment display
Press it to advance one line at the current vertical spacing
Press it to eject the inserted paper
Press it to put printer ready to print (Ready state)

Press the key corresponding to `00 START` message to put printer ready to print (Ready state).

Maintenance

This section describes some simple procedures that should be performed periodically to keep your printer running well. You will also learn how to replace a worn ribbon. Finally, you will be informed on repacking your printer,in case you need to move it.

Cleaning 5.2

Replacing The Ribbon Cartridge 5.3

Repacking Your Printer 5.5

Cleaning

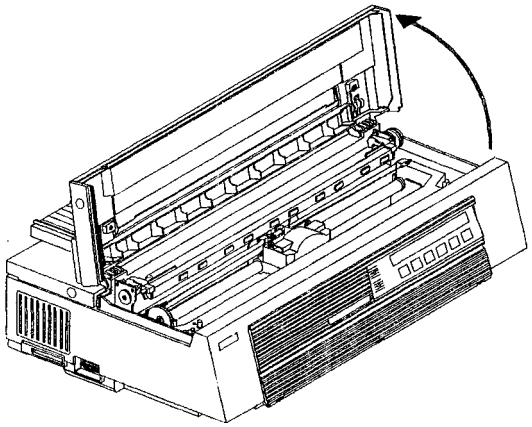
Cleaning your printer periodically will help to keep your printer in top condition so that it will always provide optimal performance:

- *use a neutral detergent or a water solution on a soft cloth to clean dirt and grease from the cabinet of your printer;*
- *do not use abrasive cloth, alcohol, paint thinner, or other such agents, because they can cause discoloration and scratches;*
- *use alcohol on soft cloth to clean rubber platen;*
- *use a soft brush to remove dust and dirt from the internal parts;*
- *be careful not to damage the electrical and mechanical components.*

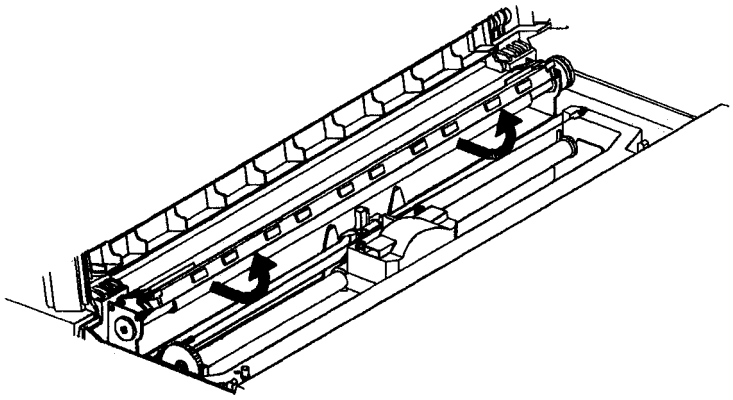
Replacing The Ribbon Cartridge

If the printing is fading, the ribbon could be worn or damaged. It is advisable to remove the used ribbon cartridge while the printer is turned off. However, your printer can be turned on during this procedure, but do not forget that it must be disabled to print.

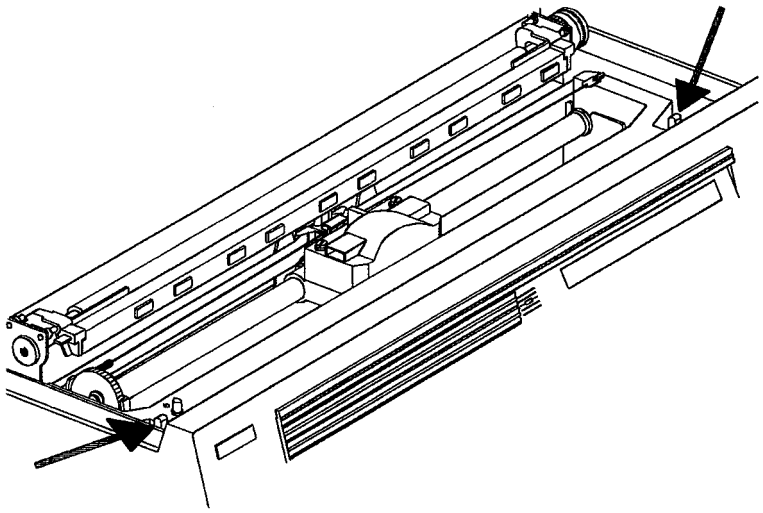
1. Raise the top cover.



2. Make sure that the printer carriage has been moved to the centre of the printer then pull the paper bail towards the front of the printer and lift it.



3. Pull the two levers of the clips that secure the ribbon cartridge towards the back of the printer. Hold the used ribbon cartridge at the rear and lift it off.



Now, you are ready to insert a new ribbon cartridge.See "The Ribbon Cartridge Installation" in Chapter 2.

Repacking Your Printer

If you need to move or ship your printer, follow these repacking instructions:

1. Remove the paper, the ribbon cartridge, the interface cable, the T-cable and the power cable from the printer.

2. Slide the print head to the centre of the printer.

3. Secure the print head in place, putting one tie at each ties on the carriage.

☞ ***Your printer weighs about 23 Kg (50.6 pounds). To avoid personal injury and damage to the printer, two people should lift it.***

4. Use the shipping material to repack your printer, if you have not thrown it away.

5. Put the ribbon cartridge and the other accessories in its respectively box.

6. Place them into the carton and close it.

7. Move or ship the printer carton as required.

Tests & Problems

You may encounter some problems with your printer. The first part of this chapter describes the procedures to understand and correct these problems yourself. You will find four flowcharts showing the solution to common problems; then a problem solving indicated by error codes on the display. The second part of this chapter describes the tests available in your printer: those performed when you turn on the printer and those available in Test Mode.

Isolating a Problem 6.2
Power Failure 6.3
Error Code on the Display 6.4
No Communication With the Host System 6.5
Poor Print Quality 6.6
Problem Solving 6.7
Testing Your Printer 6.9
Basic Assurance Tests (BAT) 6.9
The Test Mode 6.10

Isolating a Problem

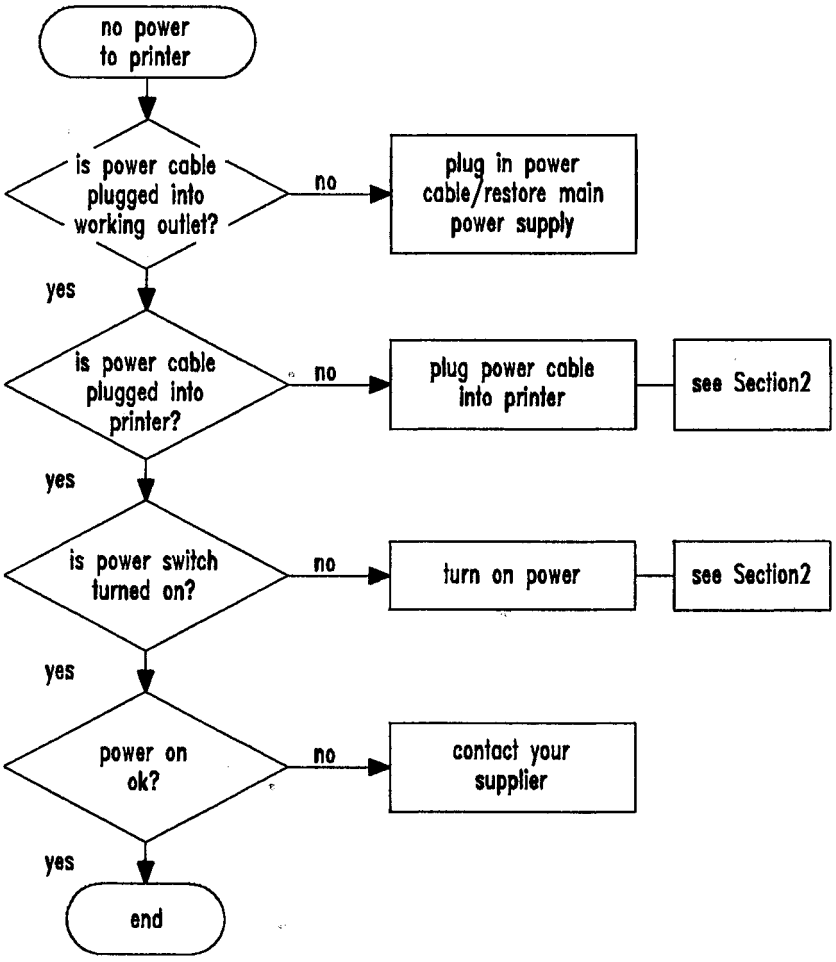
It is very important to isolate a problem before you try to correct it, or report it to your supplier.

The following are some problems you may encounter, which can be easily corrected without asking for help:

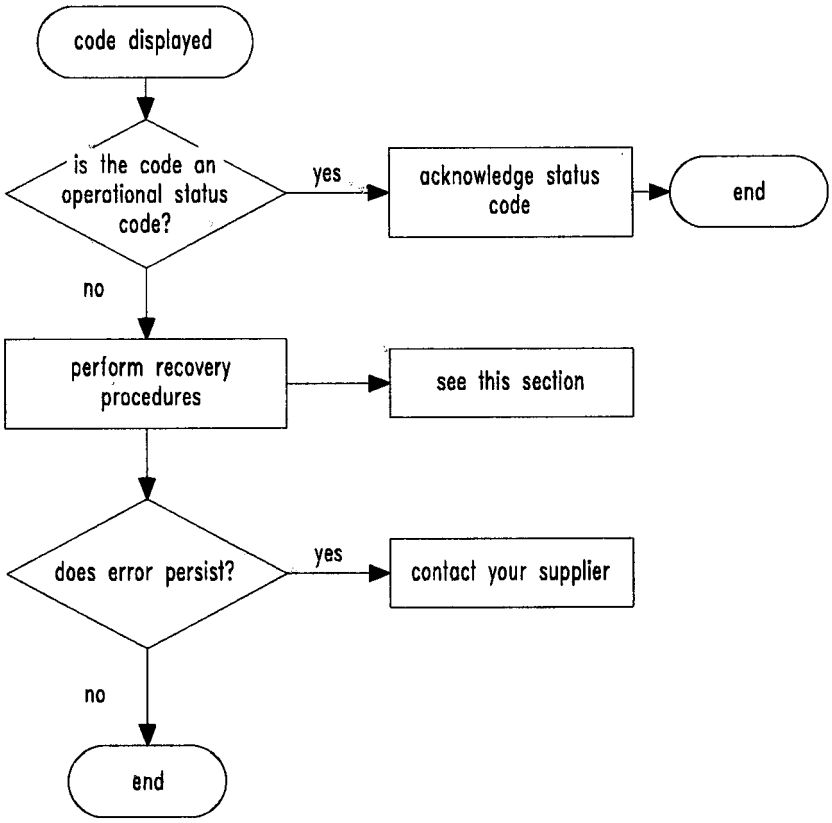
- *Power Failure*
- *Error Code on the Display*
- *No Communication With the Host System*
- *Poor Print Quality*

See the following flowcharts which illustrate what steps you must take to correct these problems.

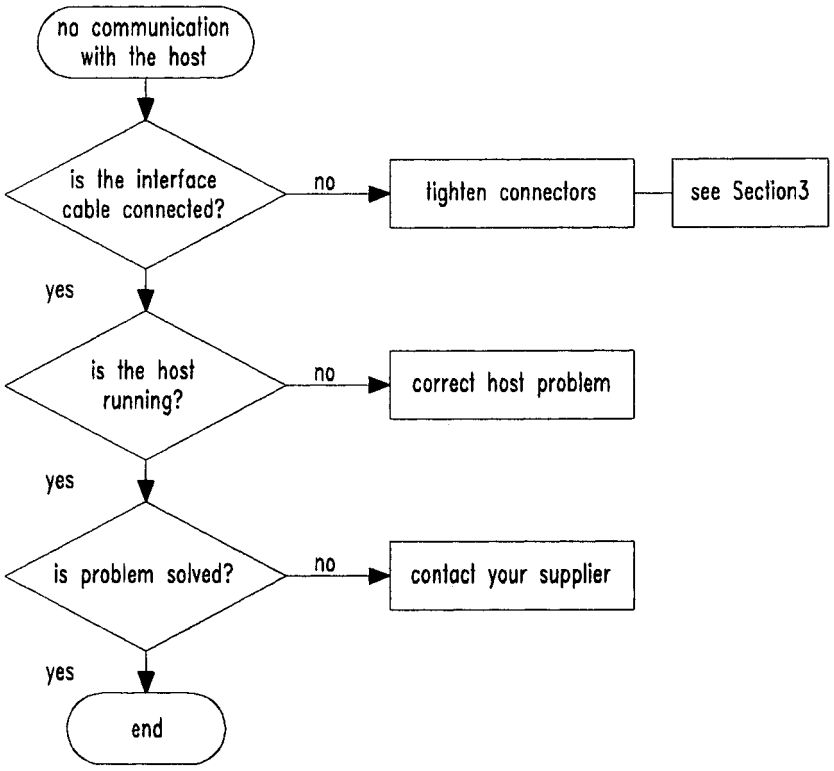
Power Failure



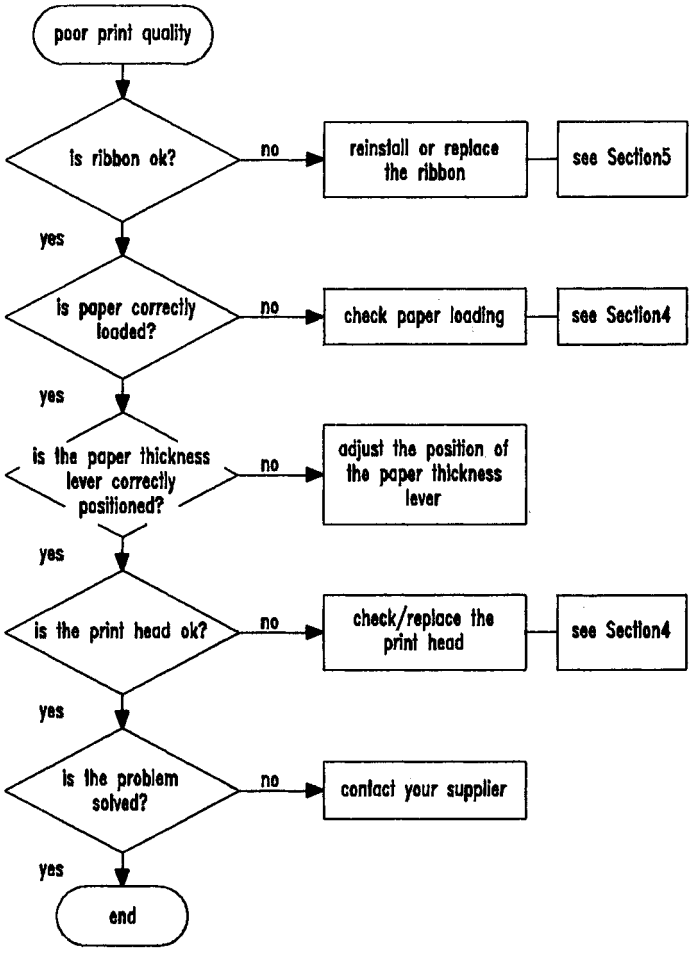
Error Code on the Display



No Communication With the Host System



Poor Print Quality



Problem Solving

Your printer uses a series of warning codes which appear on the display. These indicate that operator intervention is required. The following table contains a complete list of the warning codes, their meaning and their possible solutions.

Code	Message	Meaning & Solution
01	PAPER OUT	Load paper or, if paper is already loaded, check that it is correctly loaded.
02	PAPER JAM	This message appears when a paper jam condition is detected during printing. Try to eject the jammed form by pressing the key corresponding to UP or DOWN message.
06	HOST REQUEST ATTENTION	Model TA1 only. This message appears when printer receives a BELL code, sent to the host.
13	BIN x EMPTY	Load paper or, if paper is already loaded, check that it is correctly loaded. x stands for 1 (BIN 1) or 2 (BIN 2).
13	BOTH BINS EMPTY	Load paper into Bin1 and Bin2 or, if paper is already loaded, check that it is correctly loaded. on both bins
14	INVALID FORM SELECTION	Model TA2 and TA3 only. It appears when FORM FEED and Feed item do not match. On AS/400, if the ASF has been installed on the printer and Feed item is selected to F4, FORM FEED parameter needs to be *AUTOCUT. If printer Feed item is selected to F1, F2 or F3, FORM FEED parameter needs to be *CONT. If both FORM FEED and Feed item do not match, an error 14 (Invalid device selection) is to be expected on the printer.
15	LINE CHECK	Be sure that the interface cable is correctly connected. If the error persists, contact your supplier. This warning message appears only when the printer is enabled to print (Ready state).

Code	Message	Meaning & Solution
17	PARITY ERROR	Be sure that the interface cable is correctly connected. If the error persists, contact your supplier. This warning message appears only when the printer is enabled to print (Ready state).
22	ADDRESS NOT RECEIVED	Enter the Configuration Setup procedure and set the printer address value.
51	AGA NOT OPERATING	The FIXED=6 value is forced. Enter the Gap Adjustment procedure and try to select the fixed AGA adjustment value.
51	ADJUST GAP MANUALLY	The manual AGA adjustment is forced.
52	PRINTER SET-UP FAILURE	Adjust gap manually. The printer setup values are restored to their defaults, apart from the address which is set to 7.
67	INVALID GRAPHIC CHARACTER	Press the key corresponding to the EXIT message to enable the printer.
68	CLEAR COMMAND RECEIVED	A Clear (Cancel) function is performing.
69	DATA POSSIBLY LOST	Send a Cancel request to the host.
89	RIBBON JAM	The ribbon is damaged. Replace it with a new one

Testing Your Printer

Your printer provides several tests that you can activate to check its general state.

When you turn on the printer, a series of tests are automatically performed, in order to check that all main logical and electric parts are working correctly (Bat Assurance Tests - BAT).

If you hold down the Key#4 and Key#6 simultaneously while you turn on the printer, the Customer Service Test is performed.

Finally, other tests are available in Test Mode by pressing the key corresponding to the TEST MENU message.

Basic Assurance Tests (BAT)

These tests are automatically performed when you turn the printer on. The display will show sequentially the following display configurations:

FFF	**RUNNING INTERNAL BAT TESTS** >.....<

If an error is detected during these tests, the program will stop and the error code will be displayed. If it is an unrecoverable error, the printer must be turned off and on again.

If the BAT finish without detecting errors, the display will show:

A0	**ACTIVE PRINTER ADDRESS**
SET#A	**CUSTOM SET LOADED AT POR**

that informs you about the printer address (the default printer address is "0") and on the printer setup enabled at power on (the default setup is "A").

Then, it will be changed automatically after few seconds into a Normal Operation configuration.

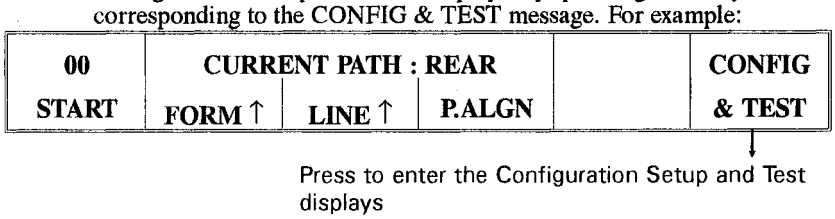
There are no printouts during the execution of these tests.

The Test Mode

The user may run certain tests in order to obtain different levels of diagnosis and printouts.

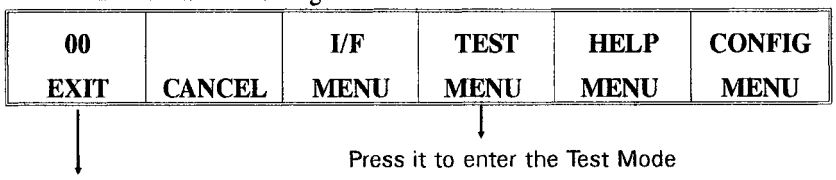
To enter the Test Mode, proceed as follows:

1. Make sure that there is no pending data and enter the Configuration Setup and test displays by pressing the key corresponding to the CONFIG & TEST message. For example:

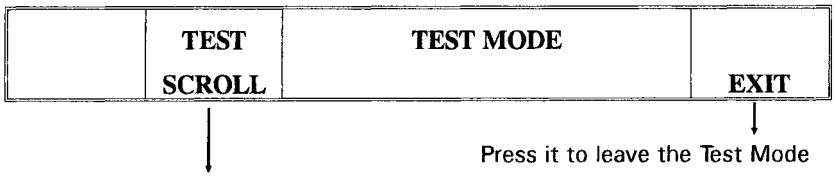


☞ ***In Test Mode, the printer is logically disconnected from the host; it enters automatically in Ready state only during the Internal Data Monitor test.***

2. The Configuration Setup and Test display appears and you can select the Test Mode by pressing the key corresponding to the TEST MENU message:



3. Now, you can scroll the available tests by pressing the key corresponding to the TEST SCROLL message:



When the desired test number appears on the display, you can run it by pressing the key corresponding to the START message. During the test execution, the display shows:

	TEST-#RUNNING!!!!
STOP	**(title of the test)**

where # is the test number. You can stop the test by pressing the key corresponding to the STOP message.

If there is paper, the test will produce a printout.

If you press Key#3 and Key#5 simultaneously while pressing SCROLL, the printout will contain also information regarding the EPROM identifiers.

At the end of the test, the display configuration that allows to scroll the tests and to exit the Test Mode will appear again.

The available tests are:

TEST-1 PRINT SET-UP VALUES

	TEST-1	**PRINT SET-UP VALUES**	
START	**SCROLL**		**EXIT**

Press it to leave the Test-1

Press it to pass to the next available test

Press it to start Test-1

In TWINAX SCS CONFIGURATION

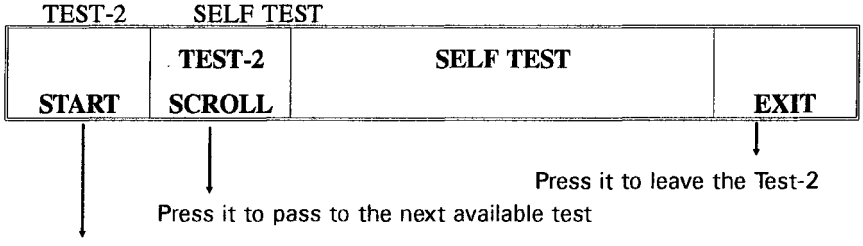
The Test-1 produces the following printout:

```
7030 - TA1 DOT MATRIX PRINTER          TOO1 - MENU SET-UP

CONFIGURATION: I/F=TWINAX SCS    OPTION=ASF    DEVICE= XXX CPS

SOFTWARE   VERSION: 1.00.01   EPROM ID'S: 78402496   78402497
CONTROLLER VERSION: 1.00.02   EPROM ID'S: 78402498   78402499
MECHANISM  VERSION: 1.02.00   EPROM ID  : 78402494

MENU SETTINGS:

I/F SELECT=TWINAX      AUTOSWITCH=YES        FF AT EOJ=YES          EOJ T.OUT=5 SEC.
ADDRESS=0              S/N=0000000           DEV INFO=0000000000000000
ACTIVE SET=SET #A      NEW POR=SET #A

CODE PAGE=00 MULTI
FEED=F1 (CFD)          BEEP=ON               ONLINE FF=DISABLE
CPI=10                 MPP=132               LPI=6                  MPL=66
QUALITY=FAST & DP      TXT-PRINT=REDIR       LFT MARGN=0.50"        TOP MARGN=12/72"
000-EJECT=IMMEDIATE    010-EJECT-TOF=TM      ASF TYPE=SNGL BIN      ASF SELEC=VIA HOST
BIN LINK=NO            DEFLT BIN=BIN 1       TRANSPRNT=DISABLE      TRAN SEQ=>>
ASFSREDIR=ASFS>BIN1    QUICK BOOT=YES        PANEL LANG.=USA-UK

ERROR LOG:

EVENT CODES:  00  00  00  00  00  00  00  00
EVENT COUNT:  00  00  00  00  00  00  00  00
```

The test automatically stops at the end of printing. The printout information depends on the installed options.

The error log message will show the last eight error types. Log error count is reinitialized every time you turn the printer on.

TEST-2 SELF TEST

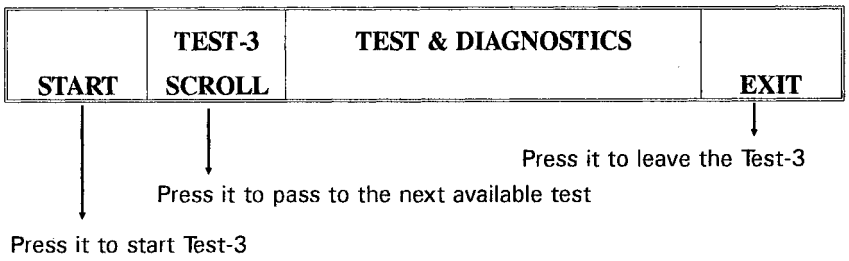


The Test-2 produces the following printout:

```
7030 - TA1 DOT MATRIX PRINTER          T002 - SELF TEST

CONFIGURATION: I/F=TWINAX SCS    OPTION=ASF    DEVICE=xxx CPS

SOFTWARE    VERSION: 1.00.01   EPROM ID'S: 78402496   78402497
CONTROLLER  VERSION: 1.00.02   EPROM ID'S: 78402498   78402499
MECHANISM   VERSION: 1.02.00   EPROM ID  : 78402494

 !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghi«»ßýþ
"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghi«»ßýþ±
#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghi«»ßýþ±°
$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghi«»ßýþ±°j
%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghi«»ßýþ±°jk
&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghi«»ßýþ±°jkl
'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghi«»ßýþ±°jklm
()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghi«»ßýþ±°jklmn
)*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghi«»ßýþ±°jklmno
*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghi«»ßýþ±°jklmnop
+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghi«»ßýþ±°jklmnopq
,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghi«»ßýþ±°jklmnopqr
-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghi«»ßýþ±°jklmnopqr²
./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghi«»ßýþ±°jklmnopqr²³
```

This test prints a continuous sliding pattern changing automatically the colour (if colour is supported on your printer). The printout characteristics are in accordance with the current printer setup.

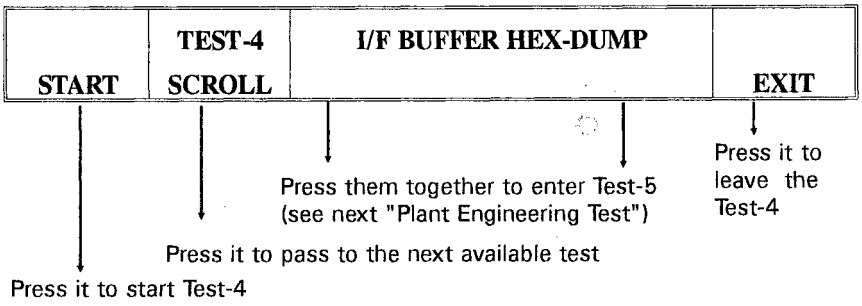
TEST-3 TEST & DIAGNOSTICS



The Test-3 produces the following printout:

```
7030 - TA1 DOT MATRIX PRINTER          T003 - CUSTOMER VERIFICATION

CONFIGURATION: I/F=TWINAX SCS    OPTION=ASF    DEVICE=xxx CPS

SOFTWARE    VERSION: 1.00.01   EPROM ID'S: 78402496   78402497
CONTROLLER  VERSION: 1.00.02   EPROM ID'S: 78402498   78402499
MECHANISM   VERSION: 1.02.00   EPROM ID  : 78402494
```

TEST-4 I/F BUFFER HEX-DUMP

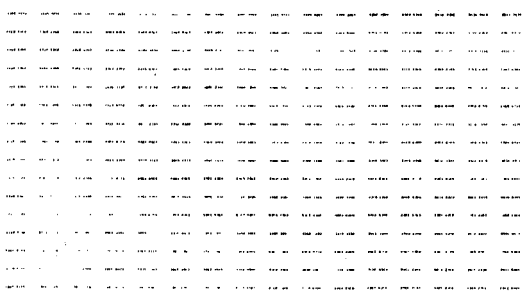


The Test-4 produces the following printout:

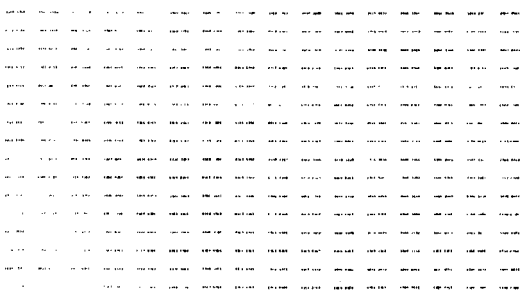
```
7030 - TA1 DOT MATRIX PRINTER          7004 - I/F BUFFER HEX DUMP

CONFIGURATION: I/F=TWINAX SCS    OPTION=ASF    DEVICE=xxx CPS

SOFTWARE   VERSION: 1.00.01   EPROM ID'S: 78402496   78402497
CONTROLLER VERSION: 1.00.02   EPROM ID'S: 78402498   78402499
MECHANISM  VERSION: 1.02.00   EPROM ID  : 78402494

RECEIVE BUFFER 00
0B00  00000000 00000000 00000000 00000000 ................
0B10  00000000 00000000 00000000 00000000 ................
0B20  00000000 00000000 00000000 00000000 ................
0B30  00000000 00000000 00000000 00000000 ................
0B40  00000000 00000000 00000000 00000000 ................
0B50  00000000 00000000 00000000 00000000 ................
0B60  00000000 00000000 00000000 00000000 ................
0B70  00000000 00000000 00000000 00000000 ................
0B80  00000000 00000000 00000000 00000000 ................
0B90  00000000 00000000 00000000 00000000 ................
0BA0  00000000 00000000 00000000 00000000 ................
0BB0  00000000 00000000 00000000 00000000 ................
0BC0  00000000 00000000 00000000 00000000 ................
0BD0  00000000 00000000 00000000 00000000 ................
0BE0  00000000 00000000 00000000 00000000 ................
0BF0  00000000 00000000 00000000 00000000 ................

RECEIVE BUFFER 01
0C00  00000000 00000000 00000000 00000000 ................
0C10  00000000 00000000 00000000 00000000 ................
0C20  00000000 00000000 00000000 00000000 ................
0C30  00000000 00000000 00000000 00000000 ................
0C40  00000000 00000000 00000000 00000000 ................
0C50  00000000 00000000 00000000 00000000 ................
0C60  00000000 00000000 00000000 00000000 ................
0C70  00000000 00000000 00000000 00000000 ................
0C80  00000000 00000000 00000000 00000000 ................
0C90  00000000 00000000 00000000 00000000 ................
0CA0  00000000 00000000 00000000 00000000 ................
0CB0  00000000 00000000 00000000 00000000 ................
0CC0  00000000 00000000 00000000 00000000 ................
0CD0  00000000 00000000 00000000 00000000 ................
0CE0  00000000 00000000 00000000 00000000 ................
0CF0  00000000 00000000 00000000 00000000 ................

RECEIVE BUFFER 02
0D00  00000000 00000000 00000000 00000000 ................
0D10  00000000 00000000 00000000 00000000 ................
0D20  00000000 00000000 00000000 00000000 ................
0D30  00000000 00000000 00000000 00000000 ................
0D40  00000000 00000000 00000000 00000000 ................
0D50  00000000 00000000 00000000 00000000 ................
0D60  00000000 00000000 00000000 00000000 ................
0D70  00000000 00000000 00000000 00000000 ................
0D80  00000000 00000000 00000000 00000000 ................
0D90  00000000 00000000 00000000 00000000 ................
0DA0  00000000 00000000 00000000 00000000 ................
0DB0  00000000 00000000 00000000 00000000 ................
0DC0  00000000 00000000 00000000 00000000 ................
0DD0  00000000 00000000 00000000 00000000 ................
0DE0  00000000 00000000 00000000 00000000 ................
0DF0  00000000 00000000 00000000 00000000 ................
```

This test prints the content of the interface input buffer in both Hexadecimal and Data format, and then for Model TA1 it prints, with their respective data buffer, the following last 3 SCS Errors:

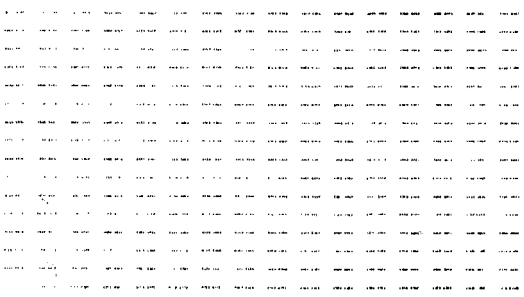
```
SCS ERRORS QUEUE (LATEST ON TOP):
SCS ERROR TYPE: None
RECEIVED  DATA:
```



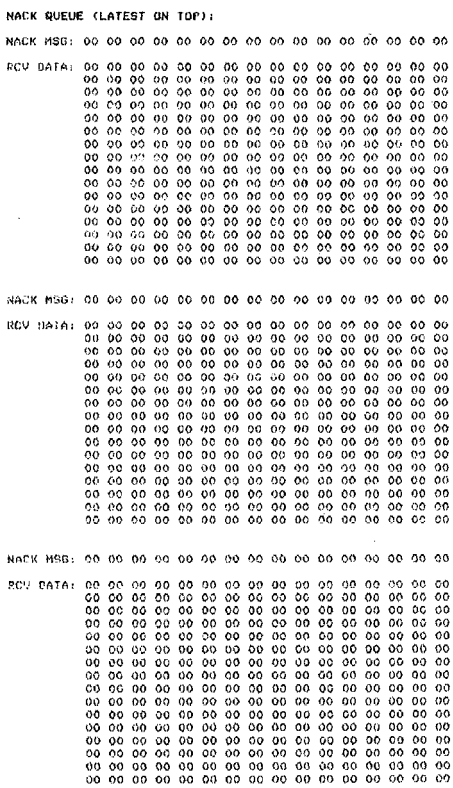
```
SCS ERROR TYPE: None
RECEIVED  DATA:
```



```
SCS ERROR TYPE: None
RECEIVED  DATA:
```



For Model TA2 and TA3 it prints, with their respective data buffer, the following last 3 NACK (Negative Acknowledgement) sent from the printer to the host:



The hex dump printout provides lines formatted as follows:

2 ADDRESS Bytes

16 HEX Bytes

16 DATA Characters

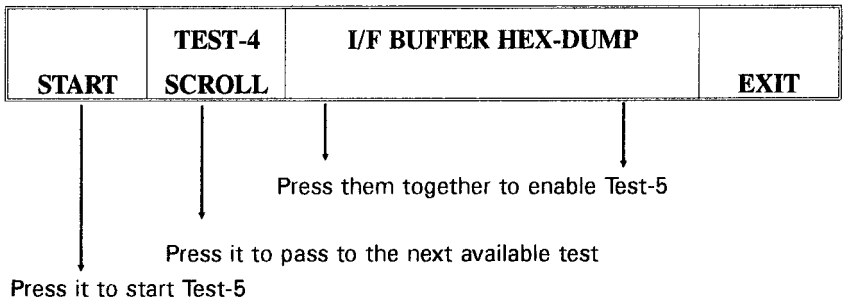
The NACK QUEUE (LATEST ON TOP) is composed by:

16 HEX Bytes of Nack messages

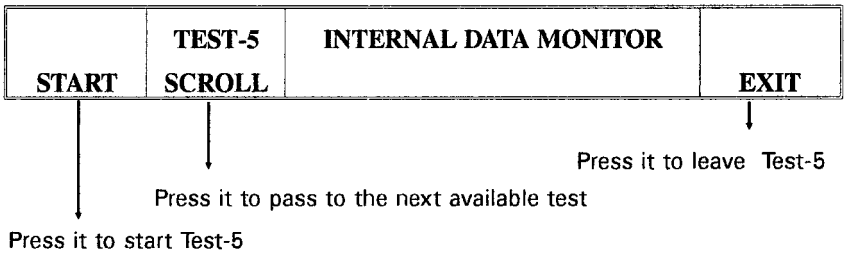
256 Bytes of Receive Data

After Test-4 printout has been printed, the NACK QUEUE is cleared.

You can select the Plant Engineering Test by pressing Key#3 and Key#5 simultaneously when the Test-4 display configuration is shown; then press the key corresponding to the SCROLL message and the Test-5 will be entered:



The display will show:



During this test the printer is in Ready state.

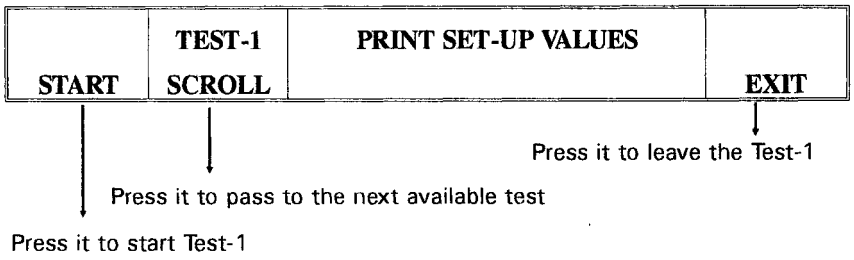
To run this test, the printer must be connected to the line. The test prints all data received from the I/F board in recurrent hex bytes.

```
7030 - TA1 DOT MATRIX PRINTER          T005 - INTERNAL DATA MONITOR

CONFIGURATION: I/F=TWINAX SCS    OPTION=ASF    DEVICE=xxx CPS

SOFTWARE    VERSION: 1.00.01   EPROM ID'S: 78402496   78402497
CONTROLLER  VERSION: 1.00.02   EPROM ID'S: 78402498   78402499
MECHANISM   VERSION: 1.02.00   EPROM ID  : 78402494
```

In ASCII CONFIGURATION

The available tests are:

TEST-1 PRINT SET-UP VALUES



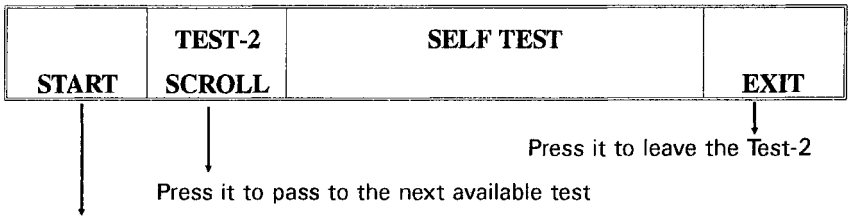
The Test-1 produces the following printout:

```
7030 - TA1 DOT MATRIX PRINTER          T001 - MENU SET-UP

CONFIGURATION: I/F=TWINAX/ASCII   OPTION=ASF   DEVICE=xxx CPS

SOFTWARE   VERSION: 1.00.01     EPROM ID'S: 78402496   78402497
CONTROLLER VERSION: 1.00.02     EPROM ID'S: 78402498   78402499
MECHANISM  VERSION: 1.02.00     EPROM ID  : 78402494

MENU SETTINGS:

I/F SELECT=ASCII        AUTOSWITCH=YES          FF AT EOJ=YES          EOJ T.OUT=5 SEC.
BUFFER=128 KBytes       DATA BITS=8             SELECTIN=ON            ACK MODE=INSIDE
S/N=0000000             DEV INFO=0000000000000000
ACTIVE SET=SET #A       NEW POR=SET #A

PANEL LANG.=USA-UK      EMULATION=PROPRINTER    CHAR. SET=CS2          NATION=CP 437
FEED=F1 (CFD)           BEEP=ON                 ONLINE FF=DISABLE      RIBBON=BLACK
CPI=10                  MPP=136                 LPI=6                  MPL=66
QUALITY=FAST & DP       NLQ FONT=COURIE         LFT MARGN=0/50"        TOP MARGN=12/72"
SKIPOVER=0              TXT-PRINT=BIDIR         GRA-PRINT=BIDIR        B.C-PRINT=BIDIR
LF ON CR=NO             CR ON LF=NO             ZERO SLASH=NO          HOST COMPR.=17.1 CPI
DOD-EJECT=IMMEDIATE     DID-EJECT=TOF=TM        ASF TYPE=SNGL BIN      BIN LINK=NO
DEFLT BIN=BIN 1         ASF3REDIR=ASF3>BIN1     QUICK-RDY=YES
```

The test automatically stops at the end of printing. The printout information depends on the installed options.

The error log message will show the last eight error types. Log error count is reinitialized every time you turn the printer on.

TEST-2 SELF TEST

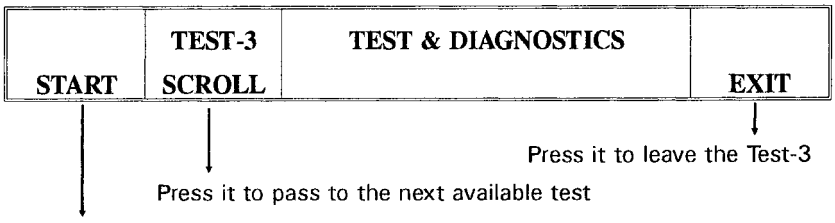


The Test-2 produces the following printout:

```
7030 - TA1 DOT MATRIX PRINTER          T002 - SELF TEST

CONFIGURATION: I/F=TWINAX/ASCII   OPTION=ASF   DEVICE= xxx CPS

SOFTWARE   VERSION: 1.00.01     EPROM ID'S: 78402496   78402497
CONTROLLER VERSION: 1.00.02     EPROM ID'S: 78402498   78402499
MECHANISM  VERSION: 1.02.00     EPROM ID  : 78402494

MENU SETTINGS:

I/F SELECT=ASCII          AUTOSWITCH=YES          FF AT EOJ=YES          EOJ T.OUT=5 SEC.
BUFFER=128 KBytes         DATA BITS=8             SELECTIN=ON            ACK MODE=INSIDE
S/N=0000000               DEV INFO=0000000000000000
ACTIVE SET=SET #A         NEW POR=SET #A

PANEL LANG.=USA-UK        EMULATION=PROPRINTER    CHAR. SET=CS2          NATION=CP 437
FEED=F1 (CFD)             BEEP=ON                 ONLINE FF=DISABLE      RIBBON=BLACK
CPI=10                    MPP=136                 LPI=6                  MPL=66
QUALITY=FAST & DP         NLQ FONT=COURIE         LFT MARGN=0/50"        TOP MARGN=12/72"
SKIPOVER=0                TXT-PRINT=BIDIR         GRA-PRINT=BIDIR        B.C-PRINT=BIDIR
LF ON CR=NO               CR ON LF=NO             ZERO SLASH=NO          HOST COMPR.=17.1 CPI
DOD-EJECT=IMMEDIATE       DID-EJECT=TOF=TM        ASF TYPE=SNGL BIN      BIN LINK=NO
DEFLT BIN=BIN 1           ASF3REDIR=ASF3>BIN1     QUICK-RDY=YES

 !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghi
 !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghij
 !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijk
 !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijkl
 !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklm
 !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmn
 !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmno
"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnop
#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopq
$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqr
%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrs
&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrst
```

This test prints a continuous sliding pattern changing automatically the colour (if colour is supported on your printer). The printout characteristics are in accordance with the current printer setup.

TEST 3 TEST & DIAGNOSTICS



The Test-3 produces the following printout:

```
7030 - TA1 DOT MATRIX PRINTER          T003 - TEST & DIAGNOSTICS

CONFIGURATION: I/F=TWINAX/ASCII   OPTION=ASF   DEVICE= xxx CPS

SOFTWARE   VERSION: 1.00.01     EPROM ID'S: 78402496   78402497
CONTROLLER VERSION: 1.00.02     EPROM ID'S: 78402498   78402499
MECHANISM  VERSION: 1.02.00     EPROM ID  : 78402494

MENU SETTINGS:

I/F SELECT=ASCII        AUTOSWITCH=YES          FF AT EOJ=YES          EOJ T.OUT=5 SEC.
BUFFER=128 KBytes       DATA BITS=8             SELECTIN=ON            ACK MODE=INSIDE
S/N=0000000             DEV INFO=0000000000000000
ACTIVE SET=SET #A       NEW POR=SET #A

PANEL LANG.=USA-UK      EMULATION=PROPRINTER    CHAR. SET=CS2          NATION=CP 437
FEED=F1 (CFD)           BEEP=ON                 ONLINE FF=DISABLE      RIBBON=BLACK
CPI=10                  MPP=136                 LPI=6                  MPL=66
QUALITY=FAST & DP       NLQ FONT=COURIE         LFT MARGN=0/50"        TOP MARGN=12/72"
SKIPOVER=0              TXT-PRINT=BIDIR         GRA-PRINT=BIDIR        B.C-PRINT=BIDIR
LF ON CR=NO             CR ON LF=NO             ZERO SLASH=NO          HOST COMPR.=17.1 CPI
DOD-EJECT=IMMEDIATE     DID-EJECT=TOF=TM        ASF TYPE=SNGL BIN      BIN LINK=NO
DEFLT BIN=BIN 1         ASF3REDIR=ASF3>BIN1     QUICK-RDY=YES
```

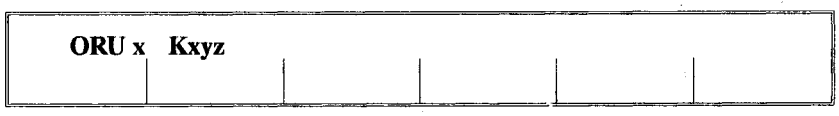
The Test-3 runs a sequence of T&D tests which check the printer. During the T&D test execution, the display shows the name of the test as follows:

T003:	LINK I/F INITIALIZATION
T003:	CPU TEST
T003:	LOW BANK EPROM CRC
T003:	HIGH BANK EPROM CRC
T003:	RAM TEST
T003:	EEPROM TEST
T003:	CPU LINK I/F TEST

T003:	CODE LINK I/F TEST
T003:	DRAM LINK I/F TEST
T003:	SRAM LINK I/F TEST
T003:	DUAL PORT LINK I/F TEST
T003:	BCP LINK I/F TEST
T003:	DIGITAL LOOPBACK TEST
T003:	CPU DOE TEST
T003:	RAM DOE TEST
T003:	EPROM DOE TEST
T003:	REBOOT

At the end the Test-3 execution, the printer will be re-initialized at power-on condition.

If an error has been detected during the execution of the T&D tests, the buzzer sounds three "beeps" and the display shows:



where:

ORU x	is the error message (Optimum Replaceable Unit)
Kxyz	is the error identification code, with: • K : that identifies a detailed message error type • x : that identifies the T&D test number (two digits) indicating the error • y : that specifies the ORU number causing the error • z : that specifies the error type.

If the error condition is recoverable, the display shows:

ORU x Kxyz		RSTART	REPEAT	NEXT

where:

RSTART pressing the key corresponding to this message, causes the T&D test sequence to restart again from the first test

REPEAT pressing the key corresponding to this message, causes the T&D in-error test to be repeated

NEXT pressing the key corresponding to this message, causes the in-error test to be by-passed and the subsequent test will be entered.

The Table 1 lists the ORU x-numbers and the Table 2 the Kxyz error codes.

Table 1

ORU x-number	Description
0	Inizialization
1	Controller
2	Not used
3	DOE
4	Not used
5	Operator panel
6	Cover switch
7	Color H/W
8	ASF protection circuit
9	Controller EPROM
A	Not used
B	Twinax interface

ORU x-number	Description
C	H/W interface controller Twinax
D	EPROM DOE
E	Reserved
F	Not used

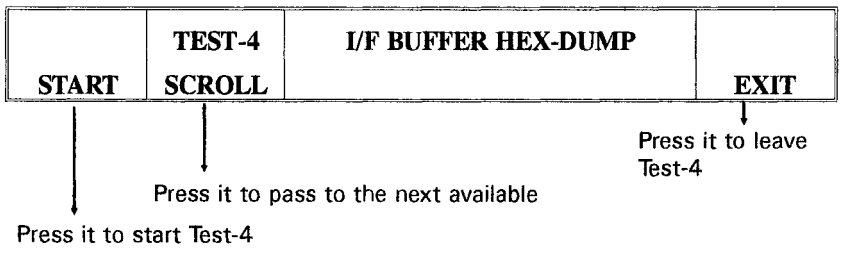
Table 2

Kxyz-number	Description
K0000	Diagnostic initialization error
K00C1	Timeout communication controller Twinax error
K00C2	Writing error on STS/CMD Twinax port
K00C3	Reading error from STS/CMD Twinax port
K00C4	Reading error from DATA Twinax port
K0110	CPU H16 error
K0290	CRC error - bank 0 EPROM - L byte
K0390	CRC error - bank 0 EPROM - H byte
K0490	CRC error - bank 1 EPROM - L byte
K0590	CRC error - bank 1 EPROM - H byte
K0610	DRAM error - bank 0, bit 0-3
K0611	DRAM error - bank 0, bit 4-7
K0612	DRAM error - bank 0, bit 8-11
K0613	DRAM error - bank 0, bit 12-15
K0614	DRAM error - bank 0, refresh loss
K1101	Dialogue DOE boot error
K1102	AGA boot error
K1103	STS/CMD Twinax port dialogue boot error

Kxyz-number	Description
K1104	DATA Twinax port dialogue boot error
K1210	EEPROM error
K13B0	CPU 80188 error
K13C1	80188 test - timeout controller Twinax
K14B0	DRAM code CPU 80188 error
K14C1	80188 code test - timeout controller Twinax
K15B0	DRAM data link error
K15C1	DRAM data link test - timeout controller Twinax
K16B0	SRAM code DP 8344 error
K16C1	DP 8344 code test - timeout controller Twinax
K17B0	Dual port RAM error
K17C1	Dual port RAM test - timeout controller Twinax
K18B0	DP 8344 error
K18C1	DP 8344 test - timeout controller Twinax
K19B0	DP 8344 interface circuit error
K19C1	Digital loopback test - timeout controller Twinax
K20B0	Link interface circuit error
K20C1	Analog loopback test - timeout controller Twinax
K2130	CPU 78310 error
K2131	Timeout during test 78310
K2230	DOEstatic RAM error
K2231	Timeout during DOE EPROM test
K23D0	CRC error (DOE EPROM)
K23D1	Timeout during DOE EPROM test
K2480	ASF protection circuit error
K2481	Timeout during ASF test
K2570	Switch color test error
K2571	Switch color test- timeout controller Twinax

Kxyz-number	Description
K2573	Ribbon initialization error
K2610	Watch dog process error
K2631	Watch dog circuit error
K2710	NVM writing error during parameter updating
K2730	Fault during sensor adjustment
K2731	Timeout during sensor adjustment
K2733	Paper present in sensor adjustemet
K2907	Twinax driver initialization error
K2930	Mechanical test error
K2931	Mechanical test - cnt DOE communication error
K293A	Paper jam error
K293C	Ribbon lock error
K293D	Print head error
K293E	AGA error
K293F	FF/CS alternation error
K296B	Cover open error
K3150	Operator panel generic error
K315X	Operator panel error - function key X (1-6)
K3260	DOE cover switch error

TEST-4 I/F BUFFER HEX-DUMP



The Test-4 produces the following printout:

```
7030 - TAL DOT MATRIX PRINTER          T004 - I/F BUFFER HEX DUMP

CONFIGURATION: I/F=TWINAX/ASCII   OPTION=ASF   DEVICE=xxx CPS

SOFTWARE    VERSION: 1.00.01     EPROM ID'S: 78402496   78402497
CONTROLLER VERSION: 1.00.02      EPROM ID'S: 78402498   78402499
MECHANISM  VERSION: 1.02.00      EPROM ID  : 78402494

MENU SETTINGS:

I/F SELECT=ASCII        AUTOSWITCH=YES          FF AT EOJ=YES          EOJ T.OUT=5 SEC.
BUFFER=128 KBytes       DATA BITS=8             SELECTIN=ON            ACK MODE=INSIDE
S/N=0000000             DEV INFO=0000000000000000
ACTIVE SET=SET #A       NEW POR=SET #A

PANEL LANG.=USA-UK      EMULATION=PROPRINTER    CHAR. SET=CS2          NATION=CP 437
FEED=F1 (CFD)           BEEP=ON                 ONLINE FF=DISABLE      RIBBON=BLACK
CPI=10                  MPP=136                 LPI=6                  MPL=66
QUALITY=FAST & DP       NLQ FONT=COURIE         LFT MARGN=0/50"        TOP MARGN=12/72"
SKIPOVER=0              TXT-PRINT=BIDIR         GRA-PRINT=BIDIR        B.C-PRINT=BIDIR
LF ON CR=NO             CR ON LF=NO             ZERO SLASH=NO          HOST COMPR.=17.1 CPI
DOD-EJECT=IMMEDIATE     DID-EJECT=TOF=TM        ASF TYPE=SNGL BIN      BIN LINK=NO
DEFLT BIN=BIN 1         ASF3REDIR=ASF1>BIN1     QUICK-RDY=YES
```

Options

This appendix describes the installation procedures of all available printer options: Automatic Sheet Feeder (single or dual bin), Bottom Feed Tractors, Desktop Pedestal with Paper Basket and finally the Floor Pedestal with Paper Basket.

The Automatic Sheet Feeder ***A.2***
Description *A.2*
Unpacking *A.3*
Single Bin Model Installation *A.5*
Dual Bin Model Installation *A.7*
Output Stacker Installation *A.10*
Choosing the Paper Type *A.12*
Paper Loading *A.14*
ASF Transparent Mode Commands (only in Twinax mode) *A.19*
Filtering Mode *A.20*

The Bottom Feed Tractors ***A.22***
Description *A.22*
Installation *A.22*
Choosing the Paper Type *A.27*
Paper Loading *A.27*

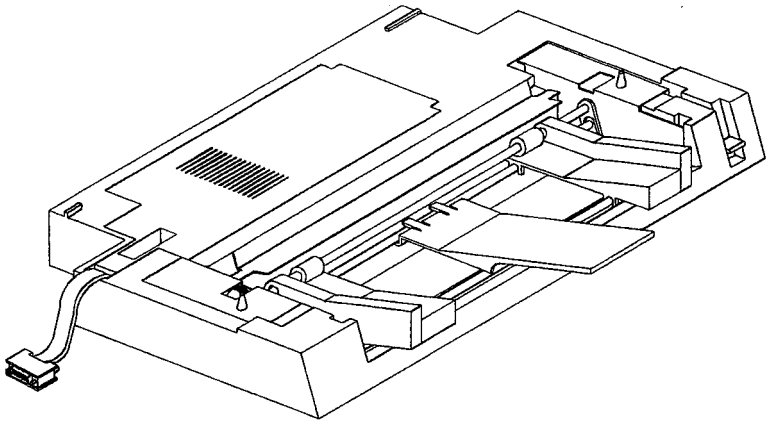
The Desktop Pedestal And The Paper Basket ***A.31***
Description *A.31*
Installation *A.32*

The Floor Pedestal And The Paper Basket ***A.33***
Description *A.33*
Installation *A.34*

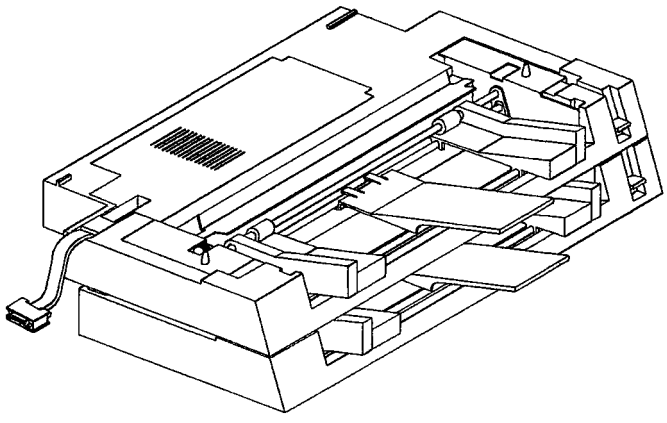
The Automatic Sheet Feeder

Description

The Automatic Sheet Feeder option is a special paper feeding device that allows you to handle large quantities of single sheet automatically. It is available in two models:

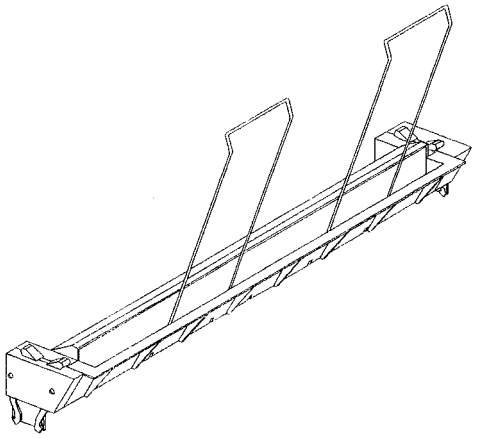


Single Bin Model



Dual Bin Model

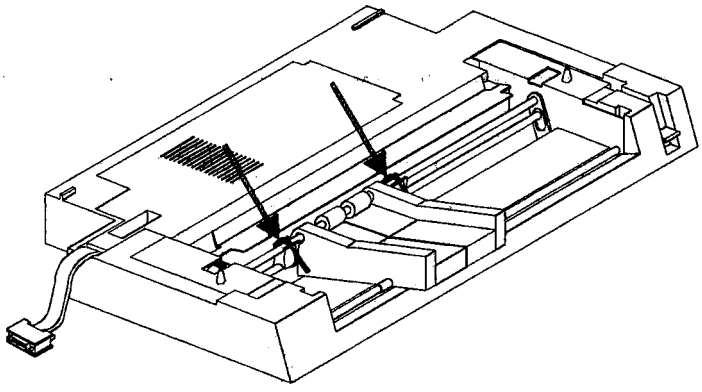
An Output Stacker is also available with your Automatic Sheet Feeder option so that the printed sheets can be collected:



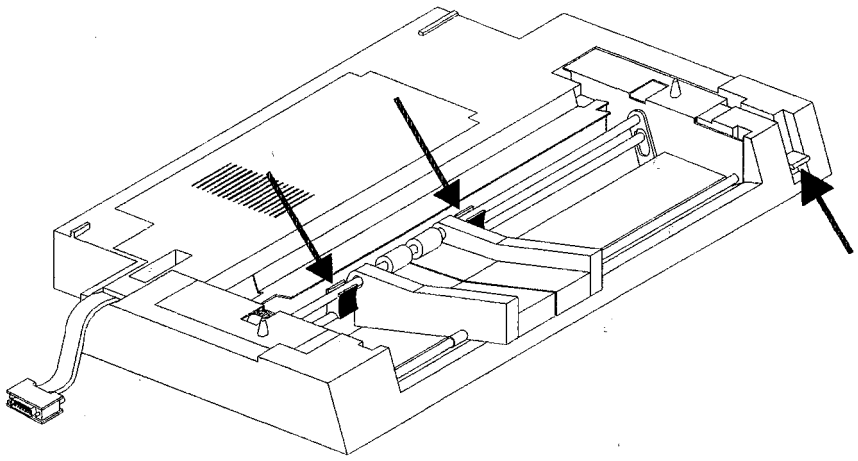
Unpacking

Open the box that contains the Automatic Sheet Feeder (ASF). If your ASF model is a dual bin model, you should open the box that contains the first bin and the box that contain the second bin. Lift the ASF from the box and remove the plastic bag that protects the ASF from dust.

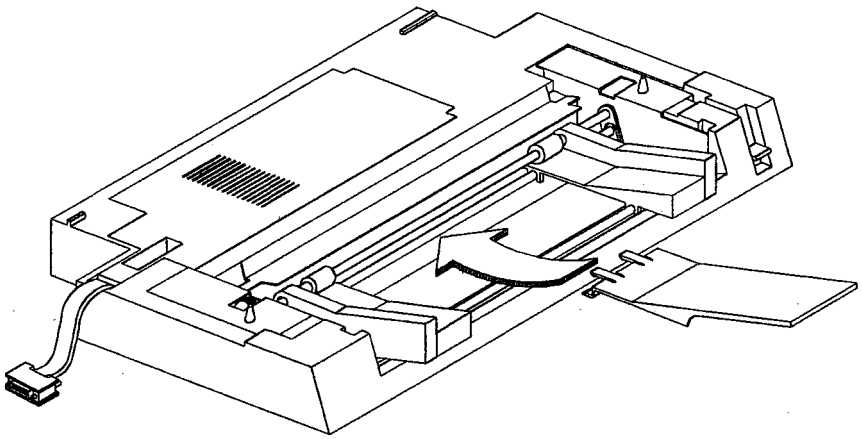
1. Cut the plastic ties that fix the paper guides.



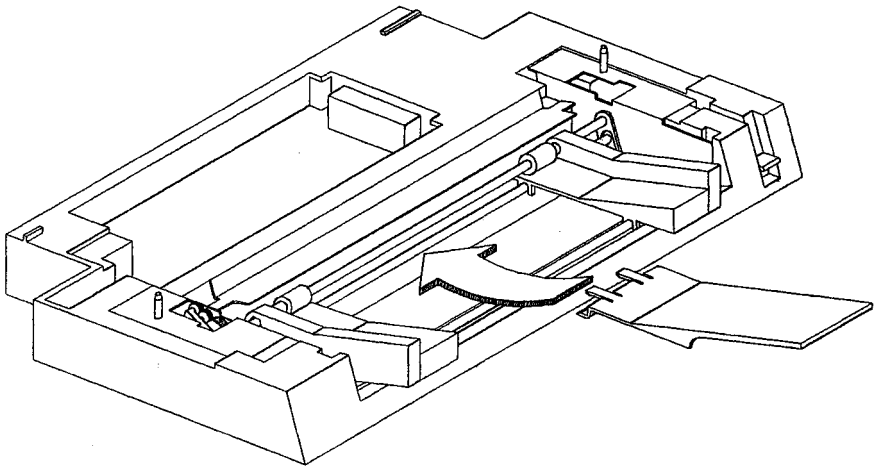
2. Raise the lever on the right side of the ASF and remove the plastic blocks placed between the two bars. Release the lever by lowering it.



3. Clip the input sorter between the left side and the right paper guides to support the paper that should be inserted.



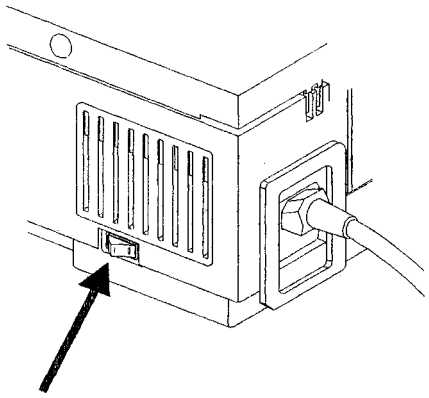
4. If your ASF is a dual bin model, repeat the same unpacking operations for the second bin.



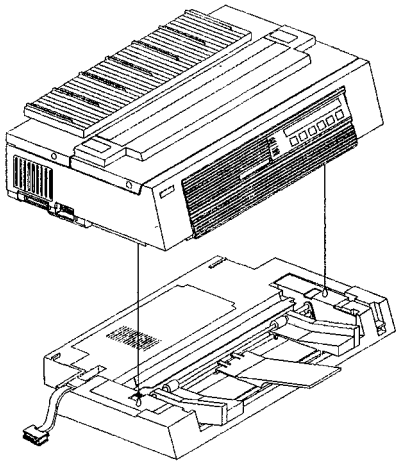
Single Bin Model Installation

Place the single bin model of the ASF in the position previously chosen for your printer. Make sure that the connection cable on the left rear side of the ASF is laid outwards.

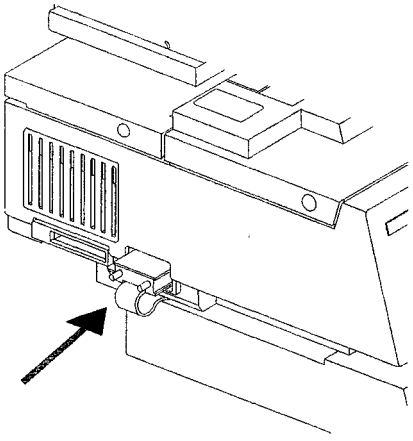
1. Turn the printer off and disconnect the power cable and the interface cable.



2. Place the printer on top of the ASF so that the front of the printer is aligned with the front side of the ASF. Make sure that the pins on the right and the left sides of the ASF are correctly inserted into the printer.



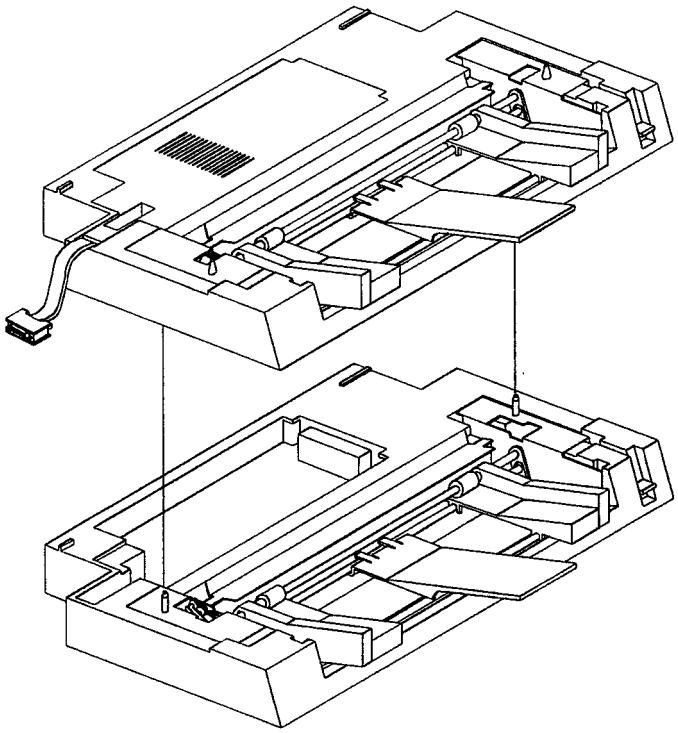
3. Insert the ASF cable connector into the connector on the printer and then insert the cable in excess into the place sidewise the ASF.



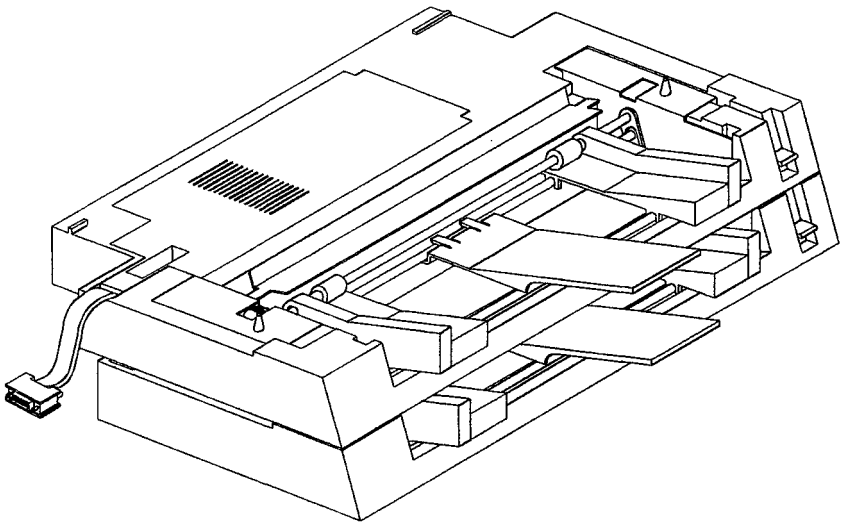
Dual Bin Model Installation

The dual bin model of the ASF is composed by the first bin and the second bin. The first bin is provided with the connection cable and should be placed over the second bin. Follow the sequence:

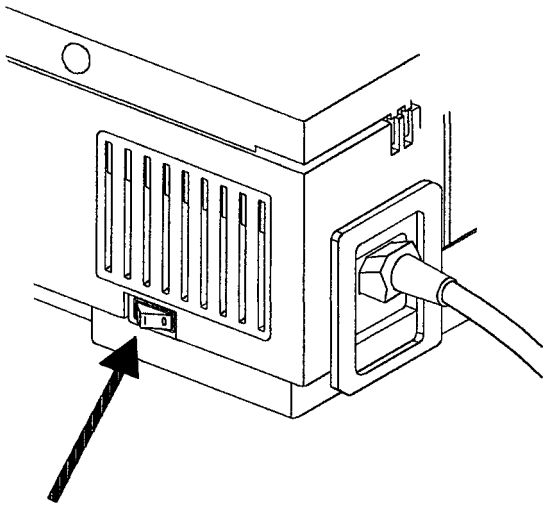
1. Place the second bin in the position previously chosen for your printer. Place the first bin on top of the second bin. Make sure that the pins on the right and on the left sides of the second bin are correctly inserted into the first bin.



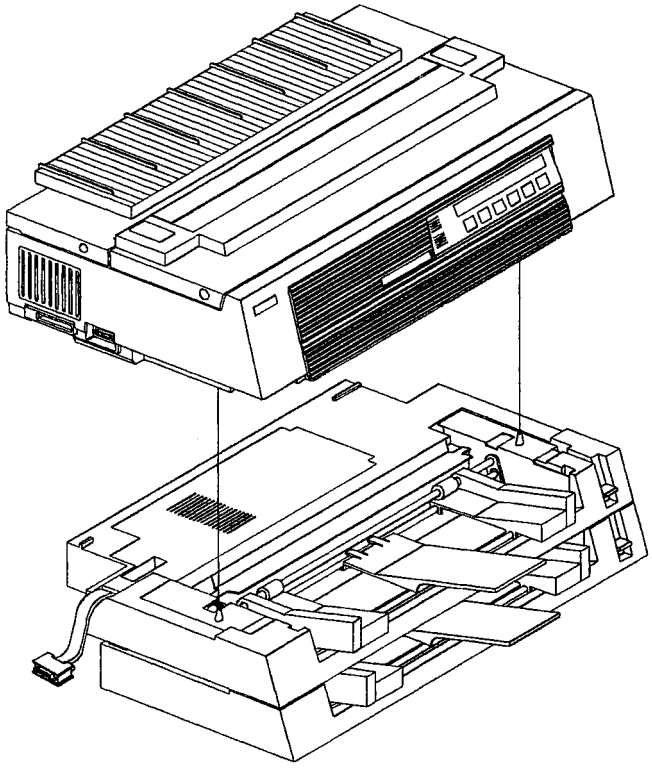
2. Make sure that the connection cable of the first bin is laid outwards.



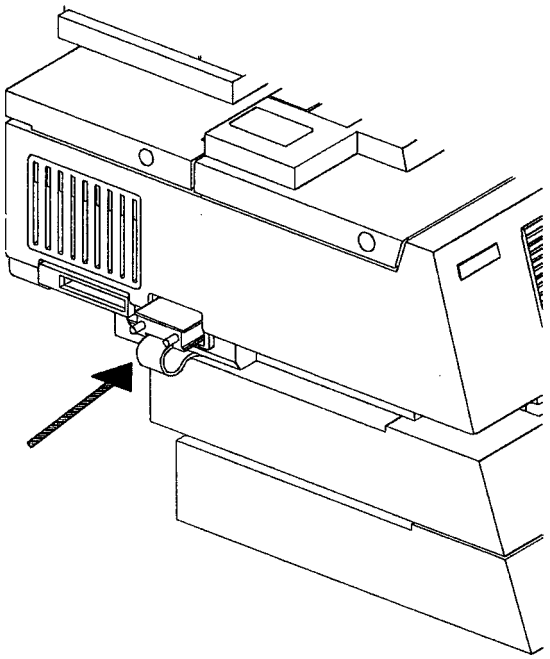
3. Turn the printer off and disconnect the power cable and the interface cable.



4. Place the printer on top of the ASF so that the front of the printer is aligned with the front side of the ASF. Make sure that the pins on the right and the left sides of the ASF are correctly inserted into the printer.



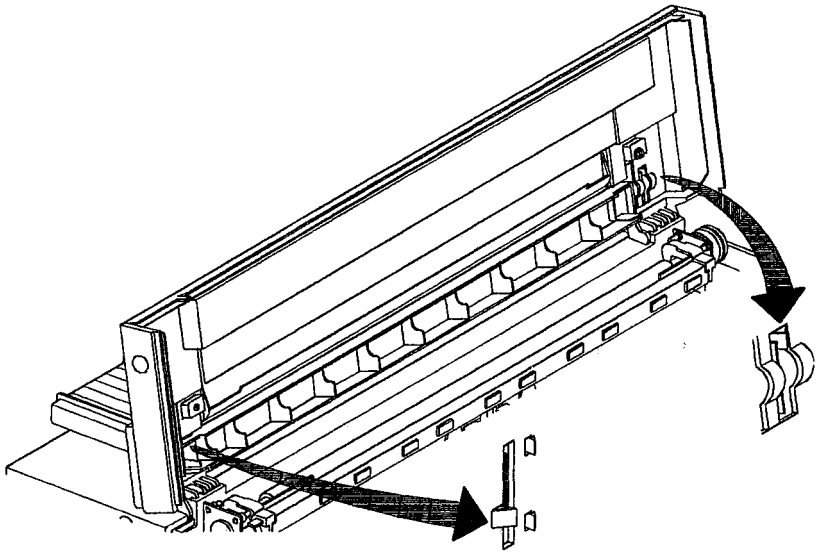
5. Insert the ASF cable connector into the connector on the printer and then insert the cable in excess into the place sidewise the ASF.



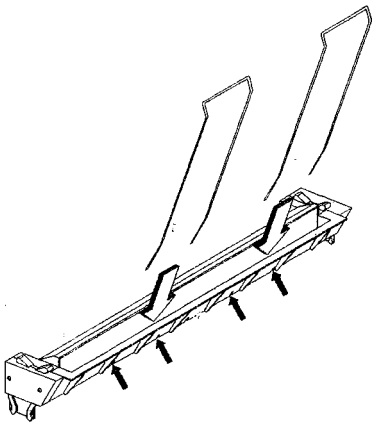
Output Stacker Installation

The output stacker should be inserted on the top of the printer and it is used to collect the printed sheets.

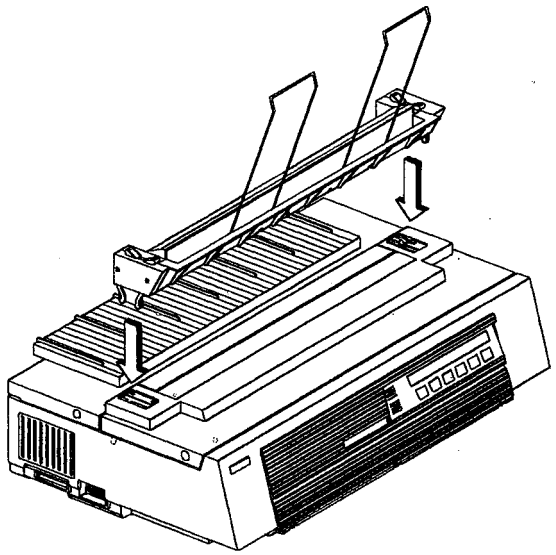
1. Open the top cover of the printer and remove the two plastic covers at each side of the cover.



2. Insert the two paper sorter in the output stacker. The left paper sorter should be placed in the leftmost position, while the right paper sorter should be adjusted according to the paper width.



3. Press together the two sprung levers that open the clips on either side of the output stacker and insert the clips into the slots on the top cover. Release the levers.



Choosing the Paper Type

Use the correct paper for your printer. This is a starting point to obtain good results in your printout. See the table below and choose the paper you need for the bin that you are using.

First bin		
Capacity		130 sheets (maximum)
Width	Minimum Maximum	120 mm (4.7 inches) 420 mm (16.5 inches)
Length	Minimum Maximum	148 mm (5.8 inches) 609 mm (24 inches)
Weight	Minimum Maximum	70 g/m2 100 g/m2
ISO A2	420 x 594 mm	portrait

First bin		
ISO A3	297 x 420 mm	portrait and landscape
ISO A4	210 x 297 mm	portrait and landscape
ISO A5	148 x 210 mm	portrait and landscape
ANSI C	17 x 22 inches	portrait
ANSI B	11 x 17 inches	portrait and landscape
ANSI A	8.5 x 11 inches	portrait and landscape
Nord American Letter	8.5 x 11 inches	portrait and landscape
American Legal	8.5 x 14 inches	portrait and landscape
Number of copies	1 original plus 3 parts	
Second bin		
Capacity		130 sheets (maximum)
Width	Minimum Maximum	120 mm (4.7 inches) 420 mm (16.5 inches)
Length	Minimum Maximum	229 mm (9 inches) 609 mm (24 inches)
Weight	Minimum Maximum	70 g/m2 100 g/m2 (single sheet)
ISO A2	420 x 594 mm	portrait
ISO A3	297 x 420 mm	portrait and landscape
ISO A4	210 x 297 mm	portrait
ANSI C	17 x 22 inches	portrait
ANSI B	11 x 17 inches	portrait and landscape
ANSI A	8.5 x 11 inches	portrait
Nord American Letter	8.5 x 11 inches	portrait
American Legal	8.5 x 14 inches	portrait
Number of copies	1 original plus 3 parts	

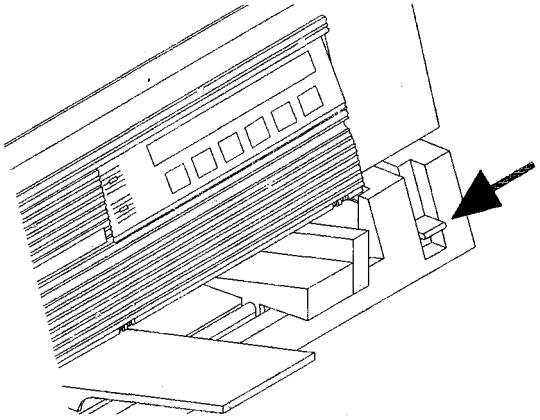
If the width of the paper that is loaded in the first bin is less than 180 mm, no paper must be loaded from the second bin.

Paper Loading

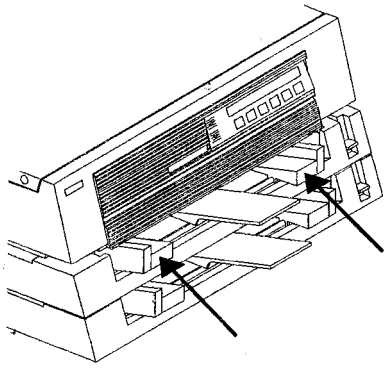
After installing the ASF, no paper should be present in your printer and you can load paper from ASF for the first time. Your printer should be still turned off.

If you wish to load paper from ASF and there is paper present in your printer, park the fanfold paper or eject the single sheet and then change the paper feed mode and the paper path according to your need.

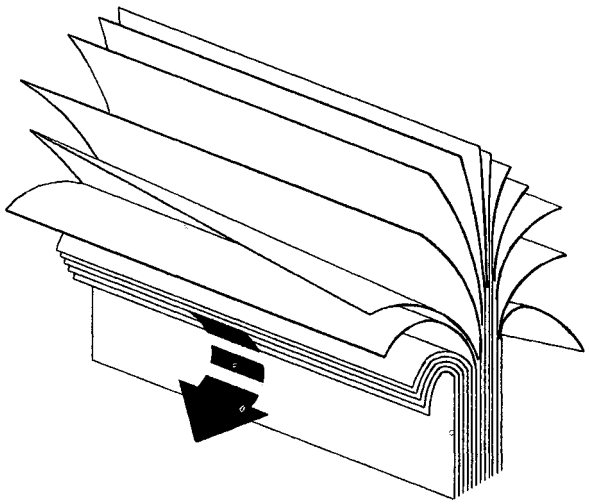
1. Raise the lever on the right side of the ASF to facilitate the paper insertion.



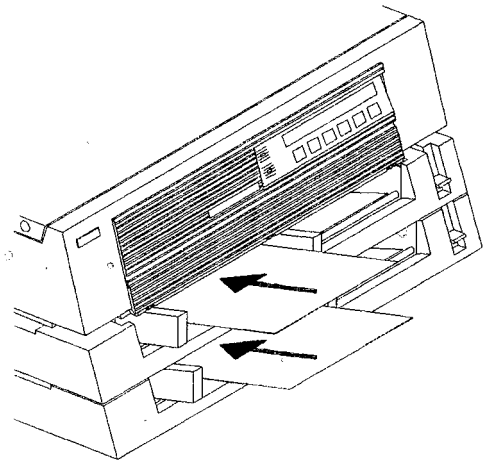
2. Adjust the right paper guide to match the width of the paper. If you have installed the second bin, adjust also the paper guides of the second bin.



3. Fan the paper throughly.



4. Insert the stack of blank paper between the two paper guides and over the input sorter. Make sure that the paper is not too close in the bin and then release the lever. If you have installed the second bin, repeat the operation for the second bin.



5. Turn the printer on. Make sure that all Basic Assurance Tests are performed. Finally, the display should show:

A0	**ACTIVE PRINTER ADDRESS**
SET#A	**CUSTOM SET LOADED AT POR**

that informs you about the printer address (the default address is "0") and on the setup enabled at power on (the default setup is "A").

☞ ***The printer address can be changed via Configuration Setup procedure.***

Do not press any function key. In fact, the display will be changed automatically after few seconds into the next display configuration (default factory setting):

00	**F1**	**REAR**	**PATH**		**CONFIG**
	FEED	**LOAD**	**SELECT**		**& TEST**

Setup and Test displays

Press it to change the F1 mode into F3 or F4

☞ ***F3 and F4 paper feed modes allow the paper loading from ASF. F3 mode allows the Transparent Mode commands while F4 mode allows either Transparent or IPDS Mode.***

6. Enter the Configuration Setup procedure (the default setup is "A") and check the settings of the ASF specific items (in TWINAX or in ASCII mode), that are:

- ASF SELEC (Automatic Sheet Feeder Selection)
- DEFLT BIN (Default Bin)
- BIN LINK (Bin Linking Option)
- TRANSPRNT (Transparent Mode (only if the Twinax mode is selected))
- TRANS SEQ (Opening and Closing Characters (only if the Twinax mode is selected))
- ASF TYPE (Automatic Sheet Feeder Type Selection)

- ASF3REDIR (Default Bin for Bin3)

Leave the Configuration Setup procedure.

7. If F3 mode has been selected, the display shows:

00	**F3**	**REAR**	**PATH**		**CONFIG**
	FEED	**LOAD**	**SELECT**		**& TEST**

and you should press the key corresponding to PATH SELECT message until ASF# LOAD message will replace the REAR LOAD message on the left.

The ASF# stays for:

ASF1 Bin 1 of single or dual bin model

ASF2 Bin 2 of dual bin model.

Press the key corresponding to the ASF# LOAD message and the paper will be fed to the first printable line. The printer enters Ready state.

8. If F4 mode has been selected, the display shows (default setting):

00	**F4**	**MANUAL**	**MANUAL**	**YES**	**CONFIG**
START	**FEED**		**DF-BIN**	**QCKRDY**	**& TEST**

Press it to set the QUICK function

Press it to change the default bin: MANUAL, BIN1, BIN2

Press it to put printer ready to print (Ready state)

where:

MANUAL means Manual insertion from front entry slot

ASF1 means Bin 1 of the single or dual bin model

ASF2 means Bin 2 of the dual bin model

The paper will be fed at receiving a print command.

☞ ***The printer enters automatically Ready state after paper loading according to the QUICK function setting (YES QCKRDY means that printer enters Ready state after paper loading; NO QCKRDY means that printer enters Stop state after paper loading).***

In Ready state (YES QCKRDY selected), the display will show:

Appears when printer is receiving data Selected paper path

-- --	RECEIVING DATA		MANUAL
STOP	CANCEL	QUIET	

Press it to stop printing and disable the printer (Stop state)

In Stop state (NO QCKRDY selected), the display will show:

00	CURRENT PATH : MANUAL			MANUAL	CONFIG
START	EJECT	LINE ↑	P.ALGN	DF-BIN	& TEST

Press it to change the default bin

Press it to enter the Paper Alignment display

Press it to advance one line at the current vertical spacing

Press it to eject the inserted sheet

Press it to put printer ready to print (Ready

If you try to insert a sheet without any host request, the buzzer starts to sound and the display shows:

00	LOADING NOT ALLOWED NOW !
EXIT	PLEASE REMOVE CUT SHEET

Press it to stop the buzzer sound

Remove the sheet from the front entry slot and the printer returns to its initial state.

The loading procedure has now been completed. You are ready to print on single sheet.

If any message appears on the display, refer to Appendix C where you will find the summary of all messages.

ASF Transparent Mode Commands (only in Twinax mode)

You can control the Automatic Sheet Feeder through specific control codes which allow you to select the different paper sources. You can select whether you want to load paper from the first bin, from the second bin or manually. If you do not use these control codes to select automatic loading, paper is loaded from the bin selected via Configuration Setup procedure (if the Twinax mode is selected) or in Normal Operation Mode (Paper Feed selection display). The default bin is the BIN1 for F1, F2 or F3 mode and MANUAL for F4 mode.

☞ ***Before sending these codes, be sure you have selected the F3 feed mode in the Configuration Setup. If you want to send a code which selects the second bin as paper source, be sure that a dual bin model has been installed on your printer.***

The control codes must be sent between transparent mode sequences. You must define the opening/closing sequence in the Configuration Setup procedure with the TRANS SEQ item. Note that the opening sequence must be the same as the closing sequence. In the Configuration Setup procedure, you must also enable the Transparent Mode (TRANSPRNT item).

☞ ***Transparent sequences are not allowed in graphics mode.***

The transparent data format for the ASF commands is:

Printable Characters:	>	>	F	1	9	x	>	>
US - EBCDIC Coding:	6EH	6EH	C6H	F1H	F9H	FxH	6EH	6EH

Where:

> > is the opening/closing transparent mode sequence;

F 1 is the command for the selection of paper source;

9 x is the source identifier, 9x is defined as follows:

Preselection identifiers
90 = manual sheet insertion (default)
91 = Preselection of bin # 1 source
92 = Preselection of bin # 2 source

Immediate Identifiers
94 = Ejects current sheet and selects manual insertion
95 = Ejects current sheet and selects bin # 1 source
96 = Ejects current sheet and selects bin # 2 source

Using the preselection identifiers, the printer will store the command until a new sheet is requested.

Using the immediate identifiers, the printer will immediately execute the command.

Filtering Mode

The user may exclude from the printer data buffer a transparent data string, with or without data compression, by using the filtering mode. The compression filtering mode is initiated by the following code sequences:

Compression mode ON

Printable Characters:	>	-	>
US - EBCDIC Coding:	6EH	60H	60H

Compression Mode OFF

Printable Characters:	>	+	>
US - EBCDIC Coding:	6EH	4EH	6EH

The default character > can be changed using the TRANS SEQ setup item (Twinax mode selected)

When the compression ON filtering mode sequence is activated, all the data is translated into NULL codes until the compression OFF sequence is activated. The transparent string will not take any space on the paper.

When the compression filtering mode is not used (opening and closing sequences without -/+), all the characters of the transparent string will be printed as spaces.

Following are some examples on the usage of transparent mode commands.

- *If you want to select manual sheet insertion using the preselection identifier 90, you must send the sequence:*

  > > F 1 9 0 > >

  and then the text you want to print. You can also use the compression filtering mode.
  Note that even if the manual sheet insertion has been selected, the ASF can be activated again by pressing the key corresponding to the FORM ↑ *and START message to enable printer (Ready state).*

- *If you want to select one tray using the preselection identifier 91 or 92 and want to use the compression filtering mode, you must send the sequence:*

  > - > F 1 9 1 > + > or > - > F 1 9 2 > + >

  and then the text you want to print.

- *If you want to select manual sheet insertion using the immediate identifier 94, you must send the sequence:*

  > > F 1 9 4 > >

  and then the file you want to print. You can also use the compression filtering mode.
  Note that even if the manual sheet insertion has been selected, the ASF can be activated again by pressing the key corresponding to the FORM ↑ *and START message to enable printer (Ready state).*

- *If you want to select one tray using the immediate identifier 95 or 96 and want to use the compression filtering mode, you must send the sequence:*

  > - > F 1 9 5 > + > or > - > F 1 9 6 > + >

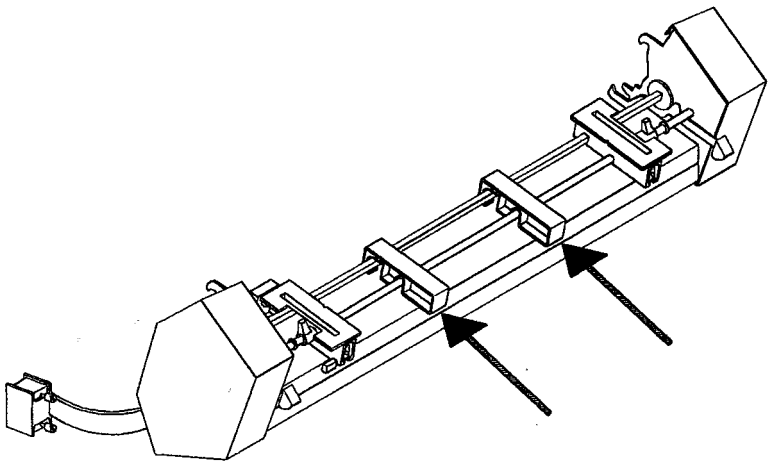
  and then the file you want to print.

The Bottom Feed Tractors

Description

The Bottom Feed option is a special paper feeding mechanism that allows you to load glued forms (labels) and heavy fanfold paper.

- *Tractors*



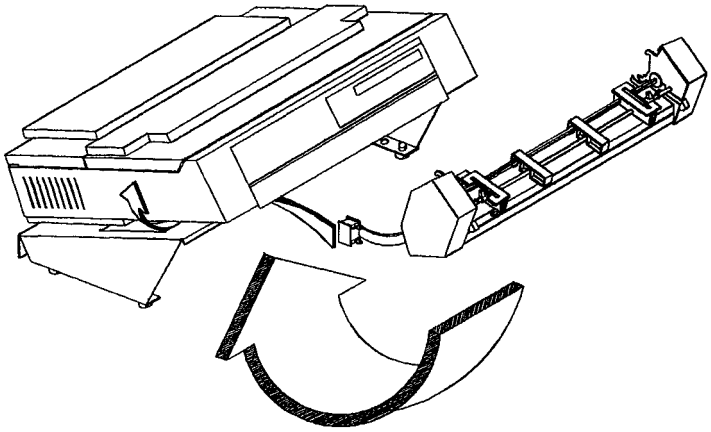
Installation

To install the Bottom Feed Tractors you need a printer pedestal (option), two types are available: the Desktop Pedestal or the Floor Pedestal, (these are accessories properly studied for a good positioning of the printer), see "The Desktop Pedestal and the Paper Basket" and "The Floor Pedestal and the Paper Basket" later in this appendix.

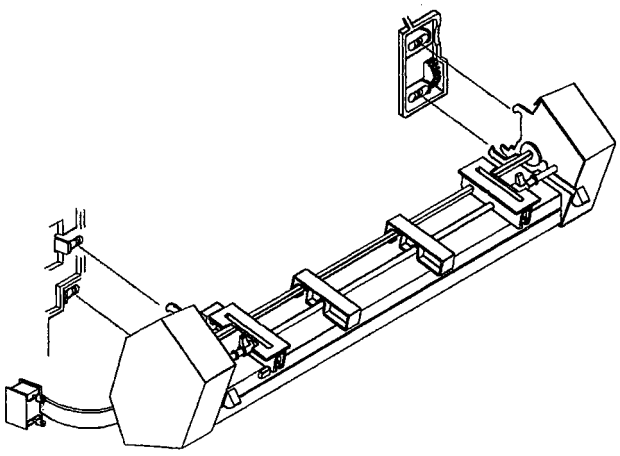
☞ ***Make sure that the paper is not present in the printer, the printer is turned off and the power and interface cables are disconnected.***

If you are provided with the Desktop Pedestal (option), follow the sequence:

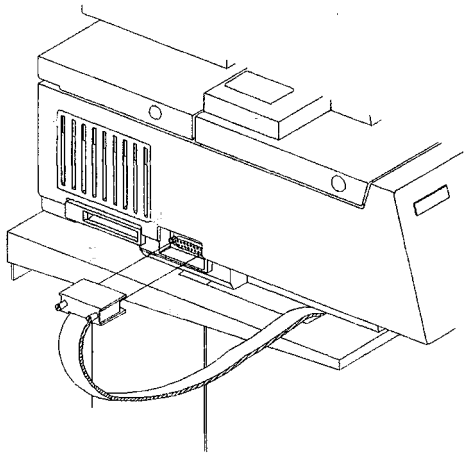
1. Hold the bottom feed tractors and insert the bottom feed cable through the slot on the Desktop Pedestal.



2. Engage firmly the tractors by inserting the clips into the slots of the printer.



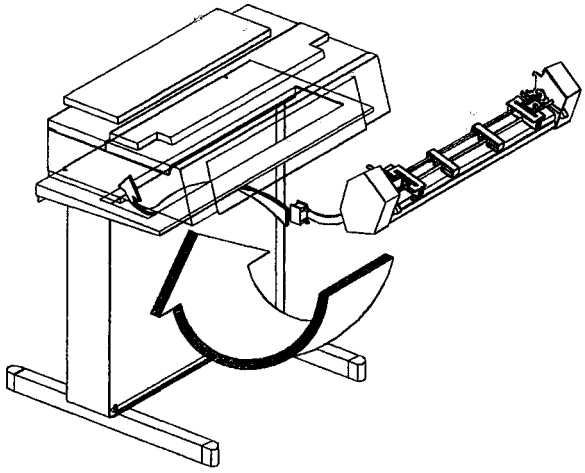
3. Insert the bottom feed connector into the printer option connector and tighten the two screws.



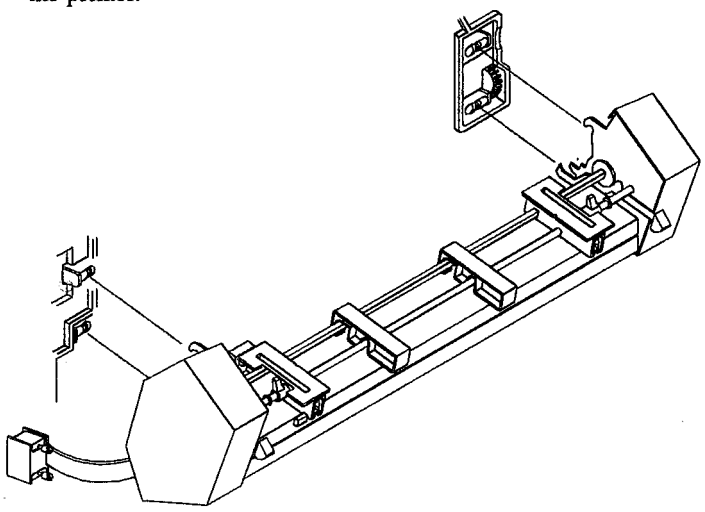
☞ ***Install the stacker (option) to collect the printed paper, see "The Desktop Pedestal and the Paper Basket" later in this appendix.***

If you are provided with the Floor Pedestal (option), follow the sequence:

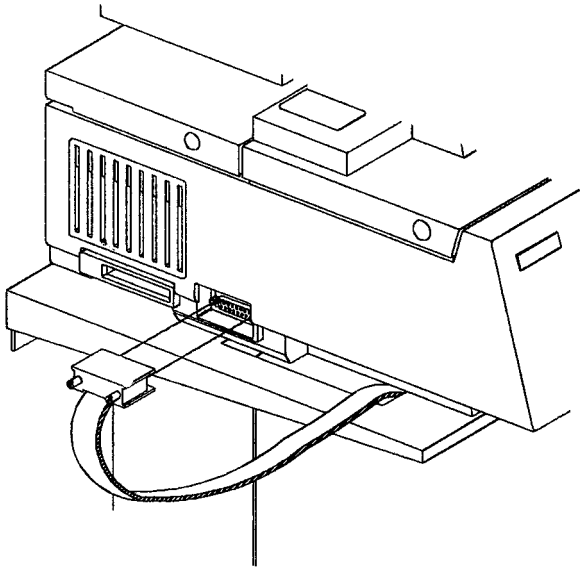
1. Hold the Bottom Feed Tractors and insert the connector cable through the slot on the Pedestal.



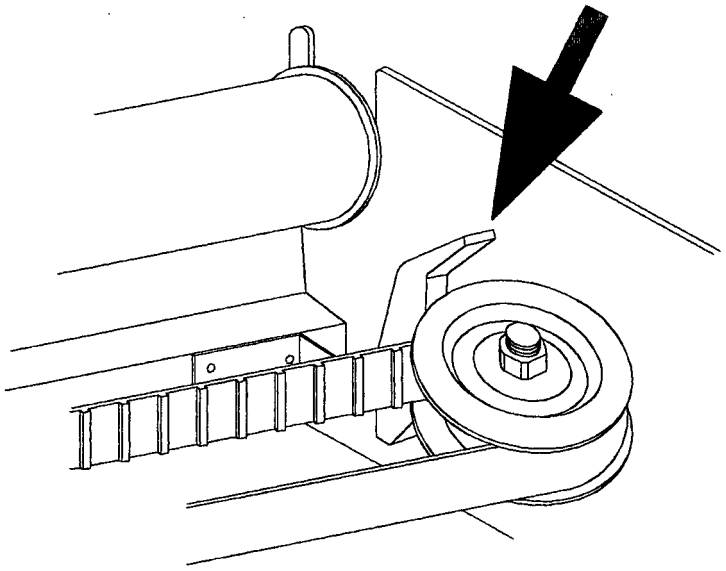
2. Engage firmly the tractors by inserting the clips into the slots of the printer.



3. Insert the bottom feed connector into the printer option connector and tighten the two screws.



4. Open the top cover and move the internal lever in the position that opens the bottom rollers, that is against the printer carriage.



☞ ***Install the stacker to collect the printed paper, see "The Floor Pedestal and the Paper Basket" later in this appendix.***

Choosing the Paper Type

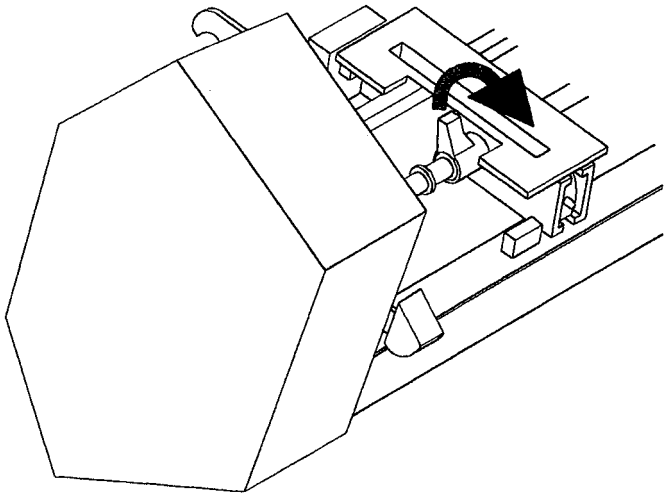
Use the correct paper for your printer. This is a starting point to obtain good results in your printout. See the table below:

Fanfold Paper		
Width	Minimum Maximum	76 mm (3 inches) 445 mm (17.5 inches)
Length	Minimum	76 mm (3 inches)

Paper Loading

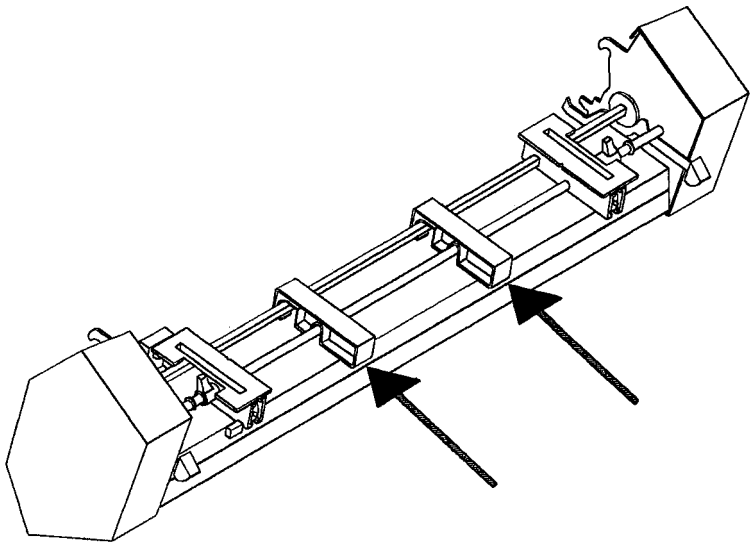
Make sure that your printer is disabled to print:

1. Unlock the left sprocket of the bottom feed tractors. Slide the sprocket to the extreme left, then lock it.

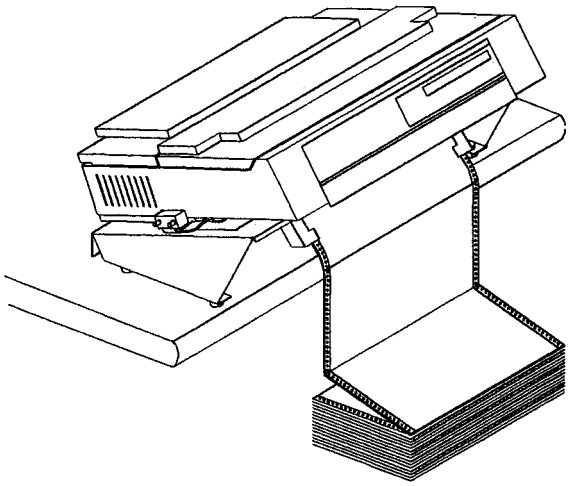


Perform the same operations for the right sprocket, adjusting it to the paper width .

2. Move the spacers evenly along the tractor bar.



3. Open the left and the right sprocket covers. Position the holes of the paper over the sprocket. Make sure that the left and the right holes of the paper are correctly aligned on the sprocket, then close the covers.



4. Make sure that no paper is present in the printer. If it is not, park the fanfold or eject the single sheet. After this operation, change the paper path in accordance with the Bottom Feed option. The display should show:

00	**F1**	**BOTTOM**	**PATH**		**CONFIG**
	FEED	**LOAD**	**SELECT**		**& TEST**

5. Enter the Configuration Setup procedure to check the setting of the specific Bottom Feed item, that is:

- *LABELS (Label Form Selection)*

Leave the Configuration Setup procedure.

6. Press the key corresponding to the BOTTOM LOAD message and the paper will be fed to the first printable line (F1 mode). The display will show:

00	**CURRENT PATH : BOTTOM**				**CONFIG**
START	**FORM ↑**	**LINE ↑**	**P.ALGN**		**& TEST**

Press it to enter the Paper Alignment display

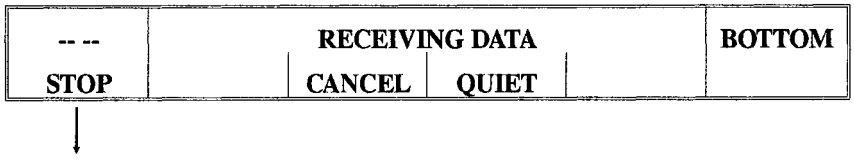
Press it to advance one line at the current vertical spacing

Press it to advance to the next form

Press it to put printer ready to print (Ready state)

7. Press the key corresponding to the 00 START message to put printer ready to print. The display will show:

Appears when printer is receiving data Selected paper path



Press it to stop printing and disable the printer (Stop state)

The loading procedure has now been completed. You are ready to print on fanfold paper.

☞ ***Do not forget that no backwards paper movement is allowed if you are using label form paper.***

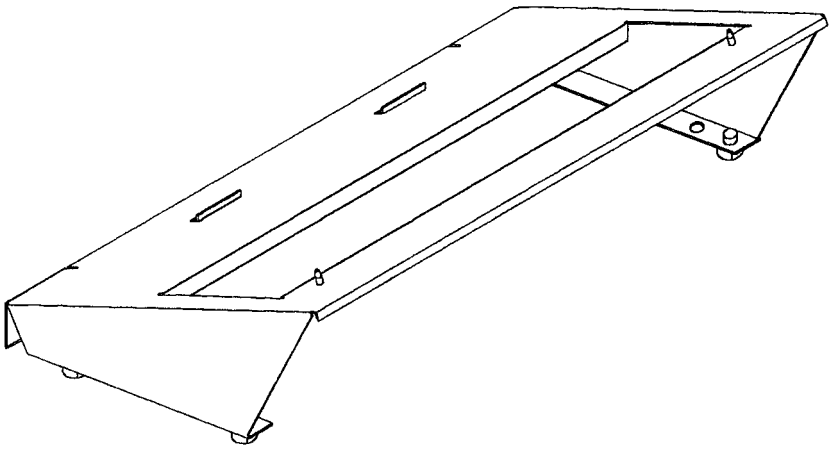
If any message appears on the display, refer to Appendix C where you will find the summary of all messages.

The Desktop Pedestal And The Paper Basket

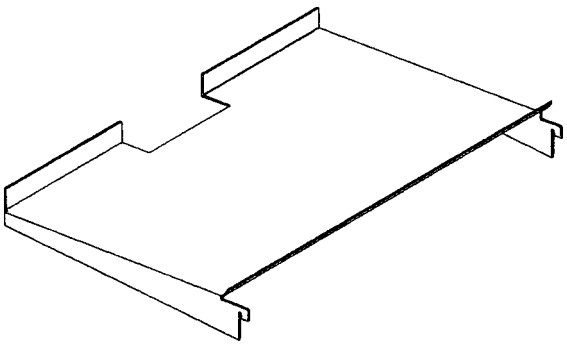
Description

The desktop pedestal is the printer pedestal that allows a correct bottom paper insertion using the bottom feed tractors when the printer is positioned on a table. On the desktop pedestal, you can install a paper basket that collects the printed paper.

- ***Desktop Pedestal***



- ***Paper Basket***

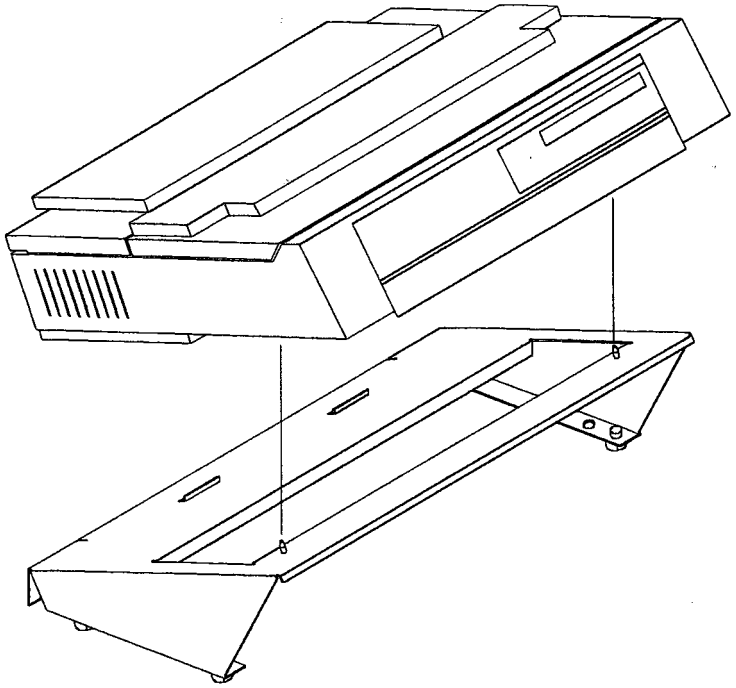


Installation

Place the desktop pedestal on the table and position it towards the front end of the table.

☞ ***Make sure that no paper is present in the printer, the printer is turned off and that the power and the interface cables are disconnected.***

1. Place the printer over the desktop pedestal ensuring that the pins on the right and left sides of the pedestal are correcly inserted into the printer.



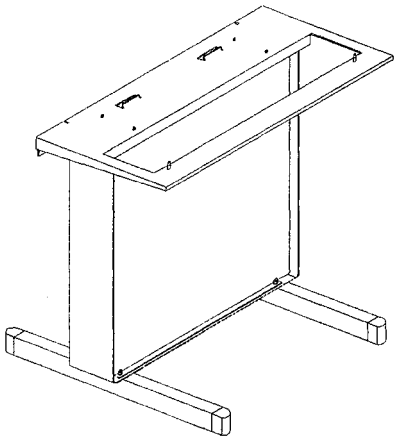
Insert the paper basket into the rear part of the desktop pedestal.

The Floor Pedestal And The Paper Basket

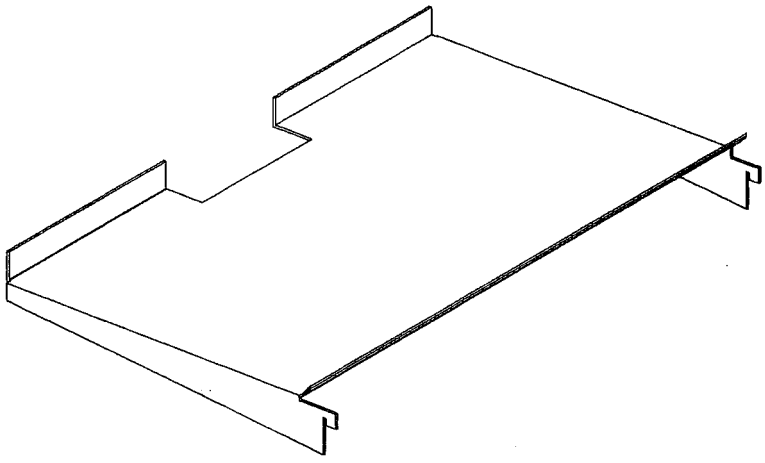
Description

The floor pedestal is the printer option that allows a correct bottom paper insertion using the bottom feed tractors. On the floor pedestal, you can install a paper basket that collects the printed paper:

- ***Floor Pedestal***

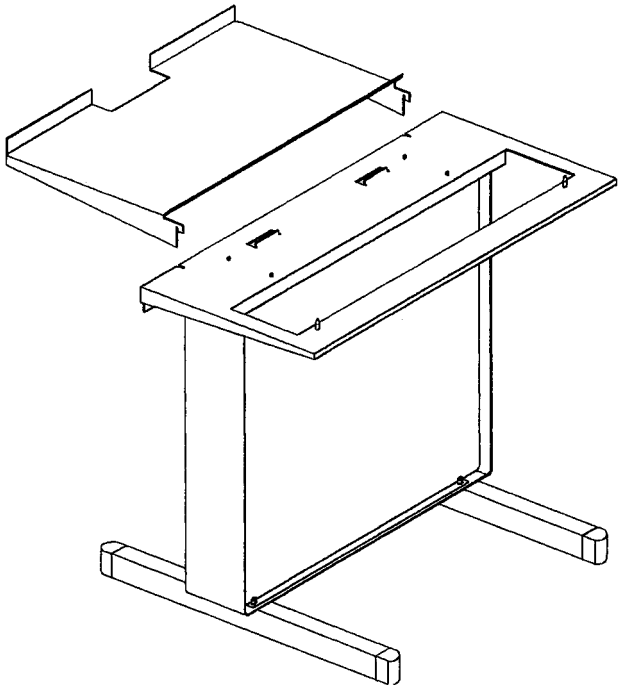


- ***Paper Basket***



Installation

Insert firmly the stacker into the rear part of the floor pedestal.



☞ ***Place the printer over the floor pedestal ensuring that the pins on the right and left sides of the pedestal are correcly inserted into the printer.***

Technical Information

This appendix contains information regarding the characteristics of your printer, that is the specifications of the equipment as well as the specifications of the paper you should use. You will also find the tables of the character sets available with your printer.

Equipment And Paper Specifications B.2

Twinax Mode Character Set Tables B.7

ASCII Mode Character Set tables B.48
Italic Character Set (EPSON Mode only) B.48
Character Set 1 B.49
Character Set 2 B.50
IBM PC Character Set (All Printable Character Table) B.51
IBM National Variations B.52
EPSON National Variations B.58

Equipment And Paper Specifications

Printing Method Bidirectional with logic-seeking

Print Head 18 needles moving ruby

Number Of Columns

TWINAX Mode
132 columns at 10 cpi
158 columns at 12 cpi
198 columns at 15 cpi
220 columns at 16.7 cpi

ASCII Mode
136 columns at 10 cpi
163 columns at 12 cpi
204 columns at 15 cpi
233 columns at 17.1 cpi
272 columns at 20 cpi

Vertical Spacing

TWINAX Mode
1/72 or 1/144 inch mechanical increments
n/72, n/144 inch (Software selectable)
6, 8 lpi (via Setup and Software selectable)
9 lpi (Software selectable only)

ASCII Mode
1/144 inch mechanical increments
n/72, n/144, n/216 inch (Software selectable)
6,8 lpi (via Setup and Software selectable)
12 lpi (via Software selectable only)

Printing Speed

	Print Mode	Horizontal Spacing (cpi)	Low Speed Model (cpi)	HighSpeed Model (cpi)
TWINAX mode	Fast Draft &DP DP-TEXT NLQ	10,12,15,16.7 10,12,15 10,12,15	450 200 100	600 300 150
ASCII mode	Fast Draft & DP NLQ	10,12,15,17.1,20 10,12,15 17.1, 20	450 100 200	600 150 300

Paper Slew Rate

Model TA1: 6 inch per second

Model TA2 and TA3: 12 inch per second

Colour Ribbon (Model TA3):

ACCENT Black - Red - Blue - Green4-Colour Primary)

SUBTRACTIVE Black - Magenta - Cyan - Yellow (8-Colour Process)

Character Set

TWINAX Mode
PC Set
APL-293, APL-310
OCR-A
OCR-B
JAPANESE - KATAKANA
STANDARD (all countries) with national language

ASCII Mode
Character Set with Italics (EPSON)
Character Set 1 and 2 (EPSON/IBM)
IBM PC Character Set with CP 437 (USA), CP 850 (Multilingual), CP 860 (Portugal) CP 863 (France/Canada), CP 865 (Denmark/Norway), CP 852 (LATIN 2)
13 EPSON National Character Sets
ISO 8859/1, ISO 8859/2

Printing Attributes

	TWINAX Mode		ASCII Mode
	No IPDS	IPDS	PROP./ EPS.
Bold	-	x	-
Emphasized	-	-	x
Double Strike	-	x	x
Double Height	-	x	x
Double Width	-	x	x
Italics	-	x	x
Overscore	-	-	x
Overstrike	-	x	x (only PROP.)
Sub/Superscript	-	x	x
Underscore	x	x	x

IPDS-Graphics (Fully IPDS Graphics Compability)

	Dot Maximum Density	
	Vertical	**Horizontal**
TWINAX Mode	**144 dpi**	**144 dpi**
ASCII Mode	**72 dpi**	**144 dpi (real)** **240 dpi (virtual)**

Bar Codes:

CODE 3/9
CODE 128
CODABAR
EAN-8 and EAN-13
INDUSTRIAL 2/5
NTERLEAVED 2/5
MATRIX 2/5
MSI Plessey (Twinax only)
POSTNET
UPC/EAN-2 and UPC/EAN-5 (Twinax only)
UPC-A
UPC-E (Twinax only)

Fonts/Typestyles

	Non-IPDS Models	**IPDS Models**
TWINAX mode	NLQ (Courier) at 5,10,12, and 15 cpi Fast Draft and DP (Gothic) at 5, 10,12,15 and 16.7 cpi	NLQ and DP-Text (Courier) at10,12 and 15cpi Fast Draft and DP (Gothic) at 10,12,15 and 16.7 cpi NLQ and DP-Text (Proportional Spacing) NLQ (OCR-A and OCR-B) at 10 cpi
ASCII mode	Draft (Courier) NLQ (Courier) NLQ (OCR-A) NLQ (OCR-B)	

Format Control

Horizontal and vertical tabulations
Form Length
Left and Right Margins

Paper Type	Single sheet, fanfold paper, labels, rigid forms or envelopes
Single Sheet Paper	ISO Standard A2, A3, A4 and A5 ANSI Standard A, B,and C N. American Letter American Legal
Single Sheet Loading	Automatic through the front entry slot Automatic with Automatic Sheet Feeder
Fanfold Loading	Semi-automatic with the tractors
Paper Width	
Single Sheet	4.7 to 17 inches (119 to 431 mm)
Fanfold	3 to 17.5 inches (76 to 444 mm)
Paper Length	
Single Sheet	Minimum 4 inches
Fanfold	Minimum 3 inches (between perforations)
Paper Tear Off Distance	0 to 2.5 inches above current print line
Options	Automatic Sheet Feeder (single or dual bin) Bottom Feed Tractors Desktop Pedestal with Paper Basket Floor Pedestal with Paper Basket
Twinax Interface	Twinaxial connection. Connectable to the IBM System/36, AS/400 and to the IBM 5294, 5394 and 5494 Control Units.
ASCII Interface	8-Bit Parallel Interface IBM PC Compatible connection.
Power Supply	
Universal, autosensing power supply:	98 to 132, 187 to 255 VAC, 49.5 to 60.5 Hz
Ac Power Consumption	125 VA
Environmental Conditions	
Temperature	10° to 38° C
Relative Humidity	10% to 90% RH (non condensing)

Standard Compliance

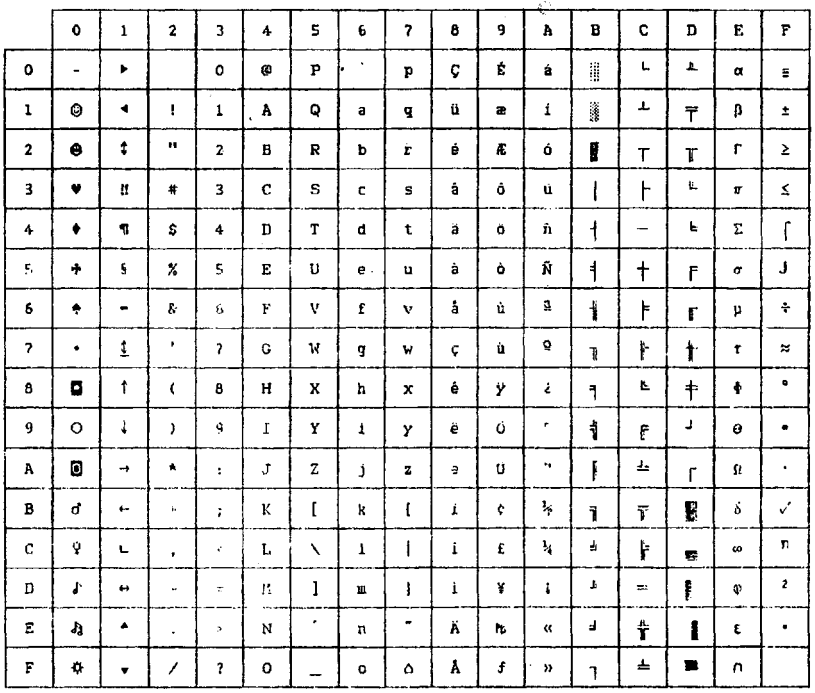
UL 1950 listed
CSA C22.2 N.220 certified
IEC 950 in compliance
CSA C108.8 Class A in compliance
FCC certified - Class A
GS MARK/EN 950 certified by TV PRODUCT SERVICE
VDE 0871/6.78 and 0875 Class A in compliance
EN 55022 - Class A in compliance

Printer Dimensions

	Printer	**Printer + ASF**
Height	180 mm	320 mm
Width	632 mm	632 mm
Depth	410 mm	420 mm
Weight	23 kg	29 kg

Twinax Mode Character Set Tables

Table B - 1. PC Character Set 1 and Set 2. (Code Page 437 Dec. - 01B5 Hex.)



	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	▶		0	@	P	`	p	Ç	É	á	▒	└	╨	α	≡
1	☺	◀	!	1	A	Q	a	q	ü	æ	í	▒	┴	╤	ß	±
2	☻	↕	"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
3	♥	‼	#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
4	♦	¶	$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
5	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	J
6	♠	▬	&	6	F	V	f	v	å	ù	ª	╢	╞	╓	µ	÷
7	•	↨	'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
8	◘	↑	(	8	H	X	h	x	é	ÿ	¿	╕	╚	╪	Φ	°
9	○	↓	)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	•
A	◙	→	*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
B	♂	←	+	;	K	[	k	{	ï	¢	½	╗	╦	▒	δ	√
C	♀	∟	,	<	L	\	l	|	î	£	¼	╝	╠	▬	∞	n
D	♪	↔	-	=	M	]	m	}	ì	¥	¡	╜	═	▌	φ	²
E	♫	▲	.	>	N	^	n	~	Ä	₧	«	╛	╬	▐	ε	■
F	☼	▼	/	?	O	_	o	⌂	Å	ƒ	»	┐	╧	▀	∩	

Table B - 2. APL-293 Character Set (Code Page 293 Dec. - 0125 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	◊	~	□	¯	⍺	(	)	\	0
1	-	-	-	-	A	J	/	^	a	j	`	⍷	A	J	⍨	1
2	-	-	-	-	B	K	S	¨	b	k	s	⍳	B	K	S	2
3	-	-	-	-	C	L	T	⍸	c	l	t	⍴	C	L	T	3
4	-	-	-	-	D	M	U	⍙	d	m	u	⍵	D	M	U	4
5	-	-	-	-	E	N	V	≤	e	n	v	-	E	N	V	5
6	-	-	-	-	F	O	W	⊢	f	o	w	x	F	O	W	6
7	-	-	-	-	G	P	X	⊣	g	p	x	\	G	P	X	7
8	-	-	-	-	H	Q	Y	∨	h	q	y	÷	H	Q	Y	8
9	-	-	-	-	I	R	Z	`	i	r	z	-	I	R	Z	9
A	-	-	-	-	¢	!	;	:	↑	⊃	∩	▾	⍲	I	≠	-
B	-	-	-	-	.	$	,	#	↓	⊂	∪	▴	⍱	!	⍀	⍟
C	-	-	-	-	<	*	%	@	≤	-	⊥	T	□	⍎	⍕	⍋
D	-	-	-	-	(	)	_	'	⌈	○	[	]	⍬	⍒	⊖	⍉
E	-	-	-	-	+	;	>	=	⌊	-	≥	≠	⍁	⍂	⍞	⍋
F	-	-	-	-	|	¬	?	"	→	←	○	|	⍱	⍲	⍫	

Table B - 3. APL-310 Character Set (Code Page 310 Dec. - 0136 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	◊	~	□	¯	α	{	}	≠	0
1	-	-	-	-	A	J	/	^	||	▮	⍺	ε	(	)	₁	1
2	-	-	-	-	B	K	S	¨	‾	▮	—	⍳	+	-	₂	2
3	-	-	-	-	C	L	T	⍁	|	■	∘	⍴	•	┼	₃	3
4	-	-	-	-	D	M	U	⊥	|	▬	∩	⍵	└	┘	U	4
5	-	-	-	-	E	N	V	⊆	¦	▉	∨	-	┌	┐	V	5
6	-	-	-	-	F	O	W	⊢	⍵	○	⍵	×	├	┤	W	6
7	-	-	-	-	G	P	X	⊣	⍷	⍴	×	\	⊥	┬	X	7
8	-	-	-	-	H	Q	Y	∨	⍱	⍺	⍲	÷	§	¶	Y	8
9	-	-	-	-	I	R	Z	`	⍳	⍴	⍳	-	I	R	Z	9
A	-	-	-	-	¢	!	¦	:	↑	⊃	∩	▾	⍲	I	≠	-
B	-	-	-	-	.	$	,	⍟	↓	⊂	∪	▵	⍱	⍳	⍲	⍟
C	-	-	-	-	<	*	%	⍫	≤	⍪	⊥	⍑	⍞	⍕	⍨	≙
D	-	-	-	-	(	)	_	'	⌈	○	[	]	⍫	⍋	⊖	●
E	-	-	-	-	+	;	>	=	⌊	±	≥	≠	⍂	⍓	⍟	⍟
F	-	-	-	-	|	¬	?	"	→	←	○	|	⍀	⍝	⍣	

Table B - 4. Austria / Germany. (Code Page 273 Dec. - 0111 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	ª	µ	ç	ä	ü	Ö	0
1	-	-	-	-		é	/	É	a	j	ß	£	A	J	+	1
2	-	-	-	-	â	ê	Â	Ê	b	k	s	¥	B	K	S	2
3	-	-	-	-	{	ë	[	È	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	©	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	@	E	N	V	5
6	-	-	-	-	ã	ì	Ã	Î	f	o	w	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	ç	ì	Ç	ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	'	Ñ	`	i	r	z	¾	I	R	Z	9
A	-	-	-	-	Ä	Ù	ö	:	«	ª	¡	¬	-	¹	²	³
B	-	-	-	-	.	$	,	#	»	º	¿	|	ó	û	Ô	Ù
C	-	-	-	-	<	*	%	§	à	æ	Ð	¯	;	}	\	]
D	-	-	-	-	(	)	_	'	ý	¸	Ý	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	´	ó	ú	Ó	Ú
F	-	-	-	-	!	¯	?	"	±	¤	®	x	õ	ÿ	Õ	

Table B - 5. Austria / Germany Alternate. (Code Page 286 Dec. - 011E Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	°	µ	¢	ä	ü	ö	0
1	-	-	-	-		é	/	É	a	j	ß	£	A	J	÷	1
2	-	-	-	-	ä	é	Á	È	b	k	s	¥	B	K	S	2
3	-	-	-	-	{	ë	[	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	©	D	M	U	4
5	-	-	-	-	á	í	Á	í	e	n	v	@	E	N	V	5
6	-	-	-	-	ã	ì	Ã	Ì	f	o	w	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	ç	l	Ç	ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	~	Ñ	`	i	r	z	¾	I	R	Z	9
A	-	-	-	-	ö	ü	ß	:	«	ª	¡	¬	-	¹	²	³
B	-	-	-	-	.	Ü	,	Ã	»	º	¿	|	ô	û	Ô	Ú
C	-	-	-	-	<	*	%	Ö	õ	æ	Ð	~	¦	]	ö	ü
D	-	-	-	-	(	)	_	'	ý	,	Ý	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	´	ó	ú	Ó	Ú
F	-	-	-	-	|	¨	?	ä	±	¤	®	x	õ	ý	Õ	

Table B - 6. Belgium. (Code Page 274 Dec. - 0112 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	°	µ	ç	é	è	ç	0
1	-	-	-	-		(	/	É	a	j	¨	£	A	J	+	1
2	-	-	-	-	â	ê	Â	È	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	@	]	À	È	d	m	u	©	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	ã	î	Ã	Î	f	o	w	¶	F	O	W	6
7	-	-	-	-	à	ï	Â	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	\	ì	Ç	Ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	ß	Ñ	`	i	r	z	¾	I	R	Z	9
A	-	-	-	-	[	]	ù	:	«	ª	¡	¬	¡	²	³	
B	-	-	-	-	.	$	,	#	»	º	¿	|	ô	û	Ó	Ú
C	-	-	-	-	<	*	%	à	ð	æ	Ð	¯	ö	ü	Ö	Ù
D	-	-	-	-	(	)	_	'	ý	¸	Ý	¯	ò	;	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	´	ó	ú	Ó	Ú
F	-	-	-	-	!	¯	?	"	±	ª	®	x	õ	ý	Õ	

Table B - 7. Brazil.
(Code Page 275 Dec. - 0113 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	°	µ	¢	õ	é	\	0
1	-	-	-	-		]	/	[	a	j	~	£	A	J	÷	1
2	-	-	-	-	â	ê	Â	É	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	©	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	`	î	@	Î	f	o	w	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	;	ì	]	Ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	β	Ñ	ã	i	r	z	¾	I	R	Z	9
A	-	-	-	-	É	$	ç	:	«	ª	¡	¬		¹	²	³
B	-	-	-	-	.	Ç	,	Õ	»	º	¿	|	ó	ú	Ô	Û
C	-	-	-	-	<	*	%	Ã	ð	æ	Ð	¯	ô	ü	Ö	Ü
D	-	-	-	-	(	)	_	'	ý	¸	Ý	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	´	ó	ú	Ó	Ú
F	-	-	-	-	!	^	?	"	±	¤	®	x	ï	ÿ	#	

Table B - 8. Canadian / French. (Code Page 260 Dec. - 0104 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	°	µ	¢	é	è	¸	0
1	-	-	-	-		é	/	É	a	j	¨	£	A	J	+	1
2	-	-	-	-	â	ê	Â	Ê	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	@	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	ã	ì	Ã	Ì	f	o	w	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	ç	ì	Ç	Ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	ß	Ñ	`	i	r	z	¾	I	R	Z	9
A	-	-	-	-	à	´	ù	:	«	ª	¡	¬	¯	¹	²	³
B	-	-	-	-	.	$	,	#	»	º	¿	|	ó	ú	Ó	Ú
C	-	-	-	-	<	*	%	@	ð	æ	Ð	¯	ö	ü	Ö	Ü
D	-	-	-	-	(	)	_	'	ý	¸	Ý	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	ß	Þ	´	ó	ú	Ó	Ú
F	-	-	-	-	!	¯	?	"	±	¤	®	×	õ	ÿ	Õ	

Table B - 9. Denmark / Norway. Code Page 277 Dec. - 0115 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	¦	@	•	µ	¢	æ	å	\	0
1	-	-	-	-		é	/	É	a	j	ü	£	A	J	+	1
2	-	-	-	-	â	ê	Â	Ê	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	©	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	ã	ì	Ã	Ì	f	o	w	¶	F	O	W	6
7	-	-	-	-	¦	ï	$	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	ç	ì	Ç	ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	ß	Ñ	`	i	r	z	¾	I	R	Z	9
A	-	-	-	-	#	¤	ø	:	«	ª	¡	¬	¹	²	³	
B	-	-	-	-	.	Å	,	Æ	»	º	¿	¦	ô	û	Ó	Ú
C	-	-	-	-	<	*	%	Ø	ò	{	Ð	~	ö	^	Ö	Ù
D	-	-	-	-	(	)	_	'	ý	,	Ý	¨	ò	ù	ô	Ù
E	-	-	-	-	+	;	>	=	þ	[	Þ	´	ó	ú	Ó	Ú
F	-	-	-	-	!	^	?	"	±	]	®	x	õ	ý	Õ	

Table B - 10. Denmark / Norway Alternate. (Code Page 287 Dec. - 011F Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	:	@	°	µ	ç	æ	å	\	0
1	-	-	-	-		é	/	É	a	j	ú	£	Æ	J	÷	1
2	-	-	-	-	â	é	Á	È	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ã	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	©	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	ã	î	Ã	Î	f	o	w	¶	F	O	W	6
7	-	-	-	-	}	ï	$	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	ç	ì	Ç	Ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	ß	Ñ	`	i	r	z	¾	I	R	Z	9
A	-	-	-	-	ø	å	¦	!	«	ª	¡	¬	-	¹	²	³
B	-	-	-	-	.	Å	,	Æ	»	º	¿	|	ó	û	Ô	Ú
C	-	-	-	-	<	*	%	Ø	à	[	Ð	¯	ð	^	Ö	Ù
D	-	-	-	-	(	)	_	'	ý	,	Ý	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	[	Þ	´	ô	ú	Ó	Ú
F	-	-	-	-	|	¬	?	æ	±	]	®	x	õ	ÿ	Õ	

Table B - 11. France.
(Code Page 297 Dec. - 0129 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	[	`	¢	é	è	ç	0
1	-	-	-	-		[	/	É	a	j	¨	#	A	J	÷	1
2	-	-	-	-	â	ê	Â	Ê	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	@	]	À	È	d	m	u	©	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	]	E	N	V	5
6	-	-	-	-	ã	î	Ã	Î	f	o	w	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	\	ì	Ç	Ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	ß	Ñ	µ	i	r	z	¾	I	R	Z	9
A	-	-	-	-	°	§	ù	:	«	ª	¡	¬	-	¹	²	³
B	-	-	-	-	.	$	,	£	»	º	¿	|	ô	ú	Ô	Ú
C	-	-	-	-	<	*	%	à	ð	æ	Ð	¯	ö	ü	Ö	Ü
D	-	-	-	-	(	)	_	'	ý	¸	Ý	¨	ò	¦	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	´	ó	ù	Ó	Ú
F	-	-	-	-	!	^	?	"	±	¤	®	x	õ	ÿ	Õ	

Table B - 12. Finland / Sweden. (Code Page 278 Dec. - 0116 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	°	µ	¢	ä	å	É	0
1	-	-	-	-		`	/	\	a	j	ü	£	A	J	÷	1
2	-	-	-	-	â	ê	Â	É	b	k	s	¥	B	K	S	2
3	-	-	-	-	{	ë	#	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	©	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	[	E	N	V	5
6	-	-	-	-	ã	ì	Ã	Ì	f	o	w	¶	F	O	W	6
7	-	-	-	-	}	ï	$	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	ç	ì	Ç	Ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	ß	Ñ	é	i	r	z	¾	I	R	Z	9
A	-	-	-	-	§	¤	ð	:	«	ª	¡	¬	-	¹	²	³
B	-	-	-	-	.	Â	,	Ã	»	º	¿	|	ô	ù	Ô	Û
C	-	-	-	-	<	*	%	ö	ò	æ	Ð	¯	:	^	@	Ù
D	-	-	-	-	(	)	_	'	ý	.	Ý	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	´	ó	ú	Ó	Ú
F	-	-	-	-	!	'	?	"	±	]	®	x	õ	ÿ	Õ	

Table B - 13. Finland / Sweden Alternate. Code Page 288 Dec. - 0120 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	°	µ	¢	ä	å	É	0
1	-	-	-	-		`	/	\	a	j	ü	£	A	J	+	1
2	-	-	-	-	á	é	Â	Ê	b	k	s	¥	B	K	S	2
3	-	-	-	-	{	ë	#	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	@	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	[	E	N	V	5
6	-	-	-	-	ã	ì	Ã	Ì	f	o	w	¶	F	O	W	6
7	-	-	-	-	]	ï	$	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	ç	ì	Ç	Ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	ß	Ñ	é	i	r	z	¾	I	R	Z	9
A	-	-	-	-	ö	å	:	:	«	ª	¡	¬	-	¹	²	³
B	-	-	-	-	.	Å	,	Ä	»	º	¿	]	ô	û	Ô	Û
C	-	-	-	-	<	*	%	ö	ð	æ	Ð	¯	;	~	@	Ü
D	-	-	-	-	(	)	_	'	ý	¸	Ý	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	´	ó	ú	Ó	Ú
F	-	-	-	-	|	¬	?	ü	±	]	®	x	õ	ý	Õ	

Table B - 14. Italy. (Code Page 280 Dec. - 0118 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	[	µ	ç	à	è	ç	0
1	-	-	-	-		]	/	É	a	j	l	#	A	J	÷	1
2	-	-	-	-	ä	ë	Ä	Ë	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	[	]	À	È	d	m	u	©	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	@	E	N	V	5
6	-	-	-	-	ã	ì	Ã	Ì	f	o	w	¶	F	O	W	6
7	-	-	-	-	"å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	\	~	Ç	Ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	β	Ñ	ù	i	r	z	¾	I	R	Z	9
A	-	-	-	-	°	é	ò	:	«	ª	¡	¬	-	¹	²	³
B	-	-	-	-	.	$	,	£	»	º	¿	|	ó	û	Ô	Û
C	-	-	-	-	<	*	%	§	ò	æ	Ð	¯	ü	ü	Ö	Ü
D	-	-	-	-	(	)	_	'	ý	,	Ý	¨	;	`	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	´	ó	ú	Ó	Ú
F	-	-	-	-	!	^	?	"	±	¤	®	x	õ	ÿ	Õ	

Table B - 15. International 1. (Code Page 256 Dec. - 0100 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	°	µ	¢	{	}	\	0
1	-	-	-	-		é	/	É	a	j	~	£	A	J		1
2	-	-	-	-	â	ê	Â	Ê	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	₧	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	f	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	ã	ì	Ã	Ì	f	o	w	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	g	p	x	⅛	G	P	X	7
8	-	-	-	-	ç	î	Ç	Î	h	q	y	⅜	H	Q	Y	8
9	-	-	-	-	ñ	ß	Ñ	`	i	r	z	⅝	I	R	Z	9
A	-	-	-	-	[	]	¦	:	«	ª	¡	¬	-	¹	²	³
B	-	-	-	-	.	$	,	#	»	º	¿	|	ô	û	ö	Ô
C	-	-	-	-	<	*	%	@	ð	®	Ð	¯	ä	ú	Ö	Ú
D	-	-	-	-	(	)	_	'	ý	¸	Ý	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	´	ó	ú	Ó	Ú
F	-	-	-	■	!	'	?	"	±	¤	®	¯	õ	ý	Õ	

Table B - 16. International 5. (Code Page 500 Dec. - 01F4 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	°	µ	¢	{	}	\	0
1	-	-	-	-		é	/	É	a	j	~	£	A	J	÷	1
2	-	-	-	-	â	è	Á	È	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Â	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	©	D	M	U	4
5	-	-	-	-	á	i	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	ã	î	Ã	Î	f	o	w	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	ç	ì	Ç	Ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	ß	Ñ	`	i	r	z	¾	I	R	Z	9
A	-	-	-	-	[	]	¦	:	«	ª	ı	¬	-	¹	²	³
B	-	-	-	-	.	$	,	#	»	º	¿	|	ó	ú	Ó	Û
C	-	-	-	-	<	*	%	@	ð	æ	Ð	¯	ö	ü	Ö	Ü
D	-	-	-	-	(	)	_	'	ý	¸	Ý	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	´	ó	ú	Ó	Ú
F	-	-	-	■	!	^	?	"	±	¤	®	x	õ	ý	Õ	

Table B - 17. Japan (English). (Code Page 281 Dec. - 0119 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	°	µ	¢	{	}	$	0
1	-	-	-	-		é	/	É	a	j	~	[	A	J	-	1
2	-	-	-	-	â	ê	Â	Ê	b	k	s	\	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	©	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	ã	ì	Ã	Ì	f	o	w	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	ç	ì	Ç	Ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	ß	Ñ	`	i	r	z	¾	I	R	Z	9
A	-	-	-	-	£	!	:	ª	«	ª	¡	'	-	¹	²	³
B	-	-	-	-	.	¥	,	#	»	º	¿	]	ó	û	Ó	Û
C	-	-	-	-	<	*	%	@	ð	æ	Ð	¯	ö	ü	Ö	Ü
D	-	-	-	-	(	)	_	'	ý	¸	Ý	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	´	ó	ú	Ó	Ú
F	-	-	-	-	|	¬	?	"	±	¤	®	x	õ	ý	Õ	

Table B - 18. Japan (Katakana). (Code Page 290 Dec. - 0122 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	[	]	ｿ	~	`	{	}	$	0
1	-	-	-	-	｡	ｉ	/	ｱ	ﾀ	ﾐ	¯	¢	A	J	-	1
2	-	-	-	-	｢	ｧ	a	j	ｲ	ﾁ	ﾑ	\	B	K	S	2
3	-	-	-	-	｣	ｰ	b	k	ｳ	ﾂ	ﾒ	t	C	L	T	3
4	-	-	-	-	､	ｱ	c	l	ｴ	ﾃ	ﾓ	u	D	M	U	4
5	-	-	-	-	･	ｲ	d	m	ｵ	ﾄ	ﾔ	v	E	N	V	5
6	-	-	-	-	ｦ	ｳ	e	n	ｶ	ﾅ	ﾕ	w	F	O	W	6
7	-	-	-	-	ｧ	-	f	o	ｷ	ﾆ	ﾒ	x	G	P	X	7
8	-	-	-	-	ｨ	ｰ	g	p	ｸ	ﾇ	ﾓ	y	H	Q	Y	8
9	-	-	-	-	ｩ	-	h	`	ｹ	ﾈ	ﾔ	z	I	R	Z	9
A	-	-	-	-	ｪ	!	-	:	ｺ	ﾉ	ﾕ	ﾚ	-	-	-	-
B	-	-	-	-	.	¥	,	#	q	r	s	ﾛ	-	-	-	-
C	-	-	-	-	<	*	%	@	ｻ	-	ﾖ	ﾜ	-	-	-	-
D	-	-	-	-	(	)	_	'	ｼ	ﾊ	ﾗ	ﾝ	-	-	-	-
E	-	-	-	-	+	;	>	=	ｽ	ﾋ	ﾘ	ﾞ	-	-	-	-
F	-	-	-	-	|	¬	?	"	ｾ	ﾌ	ﾙ	ﾟ	-	-	-	

Table B - 19. OCR 340 (Font OCR-A). (Code Page 340 Dec. - 0154 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	-	-	-	{	}	\	0
1	-	-	-	-		é	/	-	a	j	~	£	A	J		1
2	-	-	-	-	-	-	→	▌	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ä	▌	c	l	t	-	C	L	T	3
4	-	-	-	-	-	-	↑	_	d	m	u	-	D	M	U	4
5	-	-	-	-	-	-	↓	▌	e	n	v	§	E	N	V	5
6	-	-	-	-	-	-	-	_	f	o	w	-	F	O	W	6
7	-	-	-	-	å	-	Å	_	g	p	x	-	G	P	X	7
8	-	-	-	-	ç	-	-	-	h	q	y	-	H	Q	Y	8
9	-	-	-	-	-	ß	Ñ	`	i	r	z	-	I	R	Z	9
A	-	-	-	-	[	]	¦	:	-	-	¡	-	-	-	-	-
B	-	-	-	-	.	$	,	#	-	-	¿	|	-	-	-	-
C	-	-	-	-	<	*	%	â	ż	æ	Ż	-	ö	ü	ð	Ü
D	-	-	-	-	(	)	_	'	ij	.	IJ	¨	-	-	-	-
E	-	-	-	-	+	;	>	=	-	₧	-	´	-	-	ó	-
F	-	-	-	-	!	^	?	"	-	¤	-	-	-	^	-	

Table B - 20. OCR 340 (Font OCR-B). (Code Page 340 Dec. - 0154 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	-	ø	-	-	-	{	}	\	0
1	-	-	-	-		-	/	-	a	j	-	£	A	J		1
2	-	-	-	-	-	-	-	▌	b	k	s	¥	B	K	S	2
3	-	-	-	-	-	-	Ä	▌	c	l	t	-	C	L	T	3
4	-	-	-	-	-	-	-	_	d	m	u	-	D	M	U	4
5	-	-	-	-	-	-	-	▌	e	n	v	-	E	N	V	5
6	-	-	-	-	-	-	-	_	f	o	w	-	F	O	W	6
7	-	-	-	-	-	-	Å	—	g	p	x	-	G	P	X	7
8	-	-	-	-	-	-	-	-	h	q	y	-	H	Q	Y	8
9	-	-	-	-	-	-	Ñ	-	i	r	z	-	I	R	Z	9
A	-	-	-	-	[	]	-	:	-	-	-	-	-	-	-	-
B	-	-	-	-	.	¢	¬	#	-	-	-	|	⊣	∫	Y	-
C	-	-	-	-	<	*	%	@	-	-	-	-	-	-	Ö	Ü
D	-	-	-	-	(	)	-	'	-	-	-	-	-	-	-	-
E	-	-	-	-	+	;	>	=	-	Æ	-	-	-	-	ó	-
F	-	-	-	-	!	-	?	"	-	-	-	-	-	^	-	

Table B - 21. Portugal. (Code Page 282 Dec. - 011A Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	°	µ	ç	ã	·	Ç	0
1	-	-	-	-		é	/	É	a	j	ç	£	A	J	+	1
2	-	-	-	-	â	ê	Â	Ê	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	@	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	[	î	#	Î	f	o	w	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	^	ì	\	Ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	ß	Ñ	`	i	r	z	¾	I	R	Z	9
A	-	-	-	-	[	]	õ	:	«	ª	¡	¬	-	¹	²	³
B	-	-	-	-	.	$	,	Ã	»	º	¿	|	ò	û	Ó	Ú
C	-	-	-	-	<	*	%	Ô	ð	æ	Ð	¯	ö	ü	Ö	Ù
D	-	-	-	-	(	)	_	'	ý	¸	Ý	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	]	ó	ú	Ó	Ú
F	-	-	-	-	!	~	?	"	±	¤	®	x	:	ý	®	

Table B - 22. Portugal Alternate. (Code Page 831 Dec. - 033F Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	°	µ	ç	ã	´	Ç	0
1	-	-	-	-		é	/	É	a	j	ç	£	A	J	÷	1
2	-	-	-	-	â	ê	Â	Ê	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	@	D	M	U	4
5	-	-	-	-	á	i	Á	í	e	n	v	§	E	N	V	5
6	-	-	-	-	[	ì	#	Í	f	o	w	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	~	l	\	Ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	Ñ	ß	Ñ	`	i	r	z	¾	I	R	Z	9
A	-	-	-	-	{	]	ß	:	«	ª	¡	¬	-	¹	²	³
B	-	-	-	-	.	$	,	Ã	»	º	¿	|	ô	û	Ò	Û
C	-	-	-	-	Ç	*	%	Õ	ð	æ	Ð	¯	ö	ü	Ô	Ü
D	-	-	-	-	(	)	_	'	ý	¸	Ý	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	]	ó	ú	Ó	Ú
F	-	-	-	-	!	^	?	"	±	¤	Ø	x	;	ÿ	®	

Table B - 23. Spain / Spanish Speaking. (Code Page 284 Dec. - 011C Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	°	µ	ç	[	]	\	0
1	-	-	-	-		é	/	É	a	j		£	A	J	÷	1
2	-	-	-	-	â	ê	Â	Ê	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	À	È	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	©	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	ã	ì	Ã	Í	f	o	w	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	ç	ì	Ç	ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	¦	ß	#	`	i	r	z	¾	I	R	Z	9
A	-	-	-	-	[	]	ñ	:	«	ª	¡	´	-	¹	²	³
B	-	-	-	-	.	$	,	Ñ	»	º	¿	!	ó	û	Ô	Û
C	-	-	-	-	<	*	%	@	ð	æ	Ð	¯	ö	ü	Ö	Ü
D	-	-	-	-	(	)	_	'	ý	¸	Ý	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	´	ó	ú	Ó	Ú
F	-	-	-	-	|	¬	?	"	±	¤	®	x	õ	ý	Õ	

Table B - 24. Spain Alternate. (Code Page 289 Dec. - 0121 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	°	µ	¢	{	}	\	0
1	-	-	-	-		é	/	É	a	j	~	£	A	J	÷	1
2	-	-	-	-	â	ê	Â	Ê	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	©	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	ã	ì	Ã	Ì	f	o	w	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	ç	ì	Ç	Ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	¦	ß	¥	`	i	r	z	¾	I	R	Z	9
A	-	-	-	-	¢	!	¦	:	«	ª	¡	^	-	¹	²	³
B	-	-	-	-	.	$	,	Ñ	»	º	¿	!	ò	û	Ó	Û
C	-	-	-	-	<	*	%	@	ð	æ	Ð	¯	ö	ü	Ö	Ü
D	-	-	-	-	(	)	_	'	ý	¸	Ý	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	´	ó	ú	Ó	Ú
F	-	-	-	-	|	¬	?	ñ	±	¤	®	x	õ	ÿ	Õ	

Table B - 25. United Kingdom. (Code Page 285 Dec. - 011D Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	°	µ	¢	¦	]	\	0
1	-	-	-	-		é	/	É	a	j	~	[	A	J	÷	1
2	-	-	-	-	â	ê	Â	Ê	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	®	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	ã	î	Ã	Î	f	o	w	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	ç	ì	Ç	Ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	ß	Ñ	`	i	r	z	¾	I	R	Z	9
A	-	-	-	-	$	!	:	ª	«	æ	¡	^	-	¹	²	³
B	-	-	-	-	.	£	,	#	»	º	¿	)	ô	û	Ó	Û
C	-	-	-	-	<	*	%	@	ò	Æ	Ð	`	ö	ü	Ò	Ü
D	-	-	-	-	(	)	_	'	ý	¸	Ý	¨	ò	ù	Ô	Ù
E	-	-	-	-	+	;	>	=	þ	€	Þ	´	ó	ú	Ó	Ú
F	-	-	-	-	|	¬	?	"	±	¤	®	x	õ	ý	Õ	

Table B - 26. USA / Canada Bilingual. (Code Page 37 Dec. - 0025 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	°	µ	`	{	}	\	0
1	-	-	-	-		é	/	É	a	j	~	£	A	J	÷	1
2	-	-	-	-	â	ê	Â	Ê	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	©	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	ã	ì	Ã	Ì	f	o	w	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	ç	ì	Ç	Ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	ß	Ñ	`	i	r	z	¾	I	R	Z	9
A	-	-	-	-	¢	!	|	:	«	ª	¡	[	-	¹	²	³
B	-	-	-	-	.	$	,	#	»	º	¿	]	ó	ú	Ó	Ú
C	-	-	-	-	<	*	%	@	ð	æ	Ð	¯	ö	ü	Ö	Ü
D	-	-	-	-	(	)	_	'	ý	±	Ý	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	´	ó	ú	Ó	Ú
F	-	-	-	-	|	¬	?	"	±	¤	®	x	õ	ÿ	Õ	

Table B - 27. Arabic.
(Code Page 420 Dec. - 01A4 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ـ	ـً	ـٌ	ـٍ	ـَ	ـُ	٢	x	0
1	-	-	-	-		ـِ	/	ـّ	a	j	+	ـْ	A	J		1
2	-	-	-	-	ـ	ـٓ	ـٔ	ـٕ	b	k	s	ـٖ	B	K	S	2
3	-	-	-	-	ـ	-	ـٗ	ـ٘	c	l	t	ـٙ	C	L	T	3
4	-	-	-	-	ـ	-	ـٚ	ـٛ	d	m	u	ـٜ	D	M	U	4
5	-	-	-	-	ـ	ـٝ	ـٞ	ـٟ	e	n	v	ـ٠	E	N	V	5
6	-	-	-	-	ـ	ا	ـ١	ـ٢	f	o	w	-	F	O	W	6
7	-	-	-	-	ـ	ـ٣	ـ٤	ـ٥	g	p	x	-	G	P	X	7
8	-	-	-	-	ـ	ـ٦	ـ٧	ـ٨	h	q	y	ـ٩	H	Q	Y	8
9	-	-	-	-	ـ	ـ٪	ـ٫	ـ٬	i	r	z	ـ٭	I	R	Z	9
A	-	-	-	-	¢	!	:	ـٮ	ـٯ	ـٰ	ـٱ	-	ـٲ	ـٳ	ـٴ	-
B	-	-	-	-	.	$	,	#	ـٵ	ـٶ	ـٷ	ـٸ	ـٹ	ـٺ	ـٻ	ـټ
C	-	-	-	-	<	*	%	@	ـٽ	ـپ	ـٿ	ـڀ	-	ـځ	-	ـڂ
D	-	-	-	-	(	)	_	'	ـڃ	ـڄ	ـڅ	ـچ	ـڇ	ـڈ	ـډ	ـڊ
E	-	-	-	-	+	;	>	=	ـڋ	ـڌ	ـڍ	-	ـڎ	ـڏ	ـڐ	ـڑ
F	-	-	-	-	|	¬	?	"	ـڒ	ـړ	ـڔ	ـڕ	ـږ	ـڗ	ـژ	

Table B - 28. Greek.
(Code Page 423 Dec. - 01A7 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	-	Ä	Ö	Ü	-	¸	˙	•	0
1	-	-	-	-	A	K	/	Ä	a	j	¨	ά	A	J	-	1
2	-	-	-	-	B	Λ	T	Ë	b	k	s	έ	B	K	S	2
3	-	-	-	-	Γ	M	Y	Ή	c	l	t	ή	C	L	T	3
4	-	-	-	-	Δ	N	Φ		d	m	u	ϊ	D	M	U	4
5	-	-	-	-	E	Ξ	X	Ί	e	n	v	ί	E	N	V	5
6	-	-	-	-	Z	O	Ψ	Ö	f	o	w	ό	F	O	W	6
7	-	-	-	-	H	Π	Ω	Ÿ	g	p	x	ύ	G	P	X	7
8	-	-	-	-	Θ	P	-	Ώ	h	q	y	ϋ	H	Q	Y	8
9	-	-	-	-	I	Σ	-	`	i	r	z	ώ	I	R	Z	9
A	-	-	-	-	[	]	|	:	α	η	ν	ς	-	±	½	ÿ
B	-	-	-	-	.	$	,	£	β	θ	ξ	τ	ω	é	ö	Ç
C	-	-	-	-	<	*	%	§	γ	ι	ο	υ	ā	è	ó	Ç
D	-	-	-	-	(	)	_	'	δ	κ	π	φ	à	ë	ú	-
E	-	-	-	-	+	;	>	=	ε	λ	ρ	χ	ä	ï	ù	-
F	-	-	-	-	!	'	?	"	ζ	μ	σ	ψ	ê	ΐ	ü	

Table B - 29. Greek.
(Code Page 875 Dec. - 036B Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	¨	΅	°	'	£	{	}	\	0
1	-	-	-	-	A	K	/	Ά	a	j	~	ά	A	J	-	1
2	-	-	-	-	B	Λ	T	Έ	b	k	s	έ	B	K	S	2
3	-	-	-	-	Γ	M	Y	Ή	c	l	t	ή	C	L	T	3
4	-	-	-	-	Δ	N	Φ		d	m	u	ϊ	D	M	U	4
5	-	-	-	-	E	Ξ	X	Ί	e	n	v	ί	E	N	V	5
6	-	-	-	-	Z	O	Ψ	Ό	f	o	w	ό	F	O	W	6
7	-	-	-	-	H	Π	Ω	Ύ	g	p	x	ύ	G	P	X	7
8	-	-	-	-	Θ	P	Ϊ	Ώ	h	q	y	ϋ	H	Q	Y	8
9	-	-	-	-	I	Σ	Ϋ	`	i	r	z	ώ	I	R	Z	9
A	-	-	-	-	[	]	|	:	α	η	ν	ς	-	±	²	³
B	-	-	-	-	.	$	,	#	β	θ	ξ	τ	ω	½	§	⊛
C	-	-	-	-	<	*	%	@	γ	ι	ο	υ	ΐ	-	-	-
D	-	-	-	-	(	)	_	'	δ	κ	π	φ	ΰ	•	-	-
E	-	-	-	-	+	;	>	=	ε	λ	ρ	χ	‘	’	«	»
F	-	-	-	-	!	¨	?	"	ζ	μ	σ	ψ	—	;	¬	

Table B - 30. Icelandic. (Code Page 871 Dec. - 0367 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	ª	µ	¢	Þ	æ	´	0
1	-	-	-	-		é	/	É	a	j	ö	£	A	J	+	1
2	-	-	-	-	â	è	Á	È	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	·	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	©	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	ã	ì	Ã	Ì	f	o	w	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	ç	ì	Ç	Ì	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	β	Ñ	ô	i	r	z	¾	I	R	Z	9
A	-	-	-	-	Þ	Æ	¦	:	«	ª	¡	¬	-	¹	²	³
B	-	-	-	-	.	$	,	#	»	º	¿	¦	ó	û	Ô	Û
C	-	-	-	-	<	*	%	Ð	`	]	@	¯	-	ü	'	Ü
D	-	-	-	-	(	)	_	'	ý	,	Ý	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	{	]	[	\	ó	ú	Ó	Ú
F	-	-	-	-	!	Ö	?	"	±	¤	®	x	õ	ÿ	Õ	

Table B - 31. Turkish.
(Code Page 1026 Dec. - 0402 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	°	µ	¢	ç	ğ	ü	0
1	-	-	-	-		é	/	É	a	j	ö	£	A	J	÷	1
2	-	-	-	-	â	ê	Â	Ê	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	•	C	L	T	3
4	-	-	-	-	à	è	À	È	d	m	u	©	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	ã	ì	Ã	Ì	f	o	w	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	g	p	x	¼	G	P	X	7
8	-	-	-	-	[	ı	[	İ	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ñ	ß	Ñ	ı	i	r	z	¾	I	R	Z	9
A	-	-	-	-	Ç	Ğ	ş	:	«	ª	¡	¬		¹	²	³
B	-	-	-	-	.	İ	,	Ö	»	º	¿	¦	ô	û	Ô	Û
C	-	-	-	-	<	*	%	Ş	)	æ	]	¯	^	\	#	"
D	-	-	-	-	(	)	_	'	`	¸	$	¨	ò	ù	Ò	Ù
E	-	-	-	-	+	;	>	=	¦	Æ	@	´	ó	ú	Ó	Ú
F	-	-	-	-	!	^	?	Ü	±	¤	Ø	x	õ	ÿ	Õ	

Table B - 32. DCF Compatibility. (Code Page 1002 Dec. - 03EA Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	-	-	-	-	0	-	-	\	0
1	-	-	-	-		-	/	-	a	j	-	1	A	J	-	1
2	-	-	-	-	-	-	-	-	b	k	s	2	B	K	S	2
3	-	-	-	-	-	-	-	-	c	l	t	3	C	L	T	3
4	-	-	-	-	-	-	-	-	d	m	u	4	D	M	U	4
5	-	-	-	-	-	-	-	-	e	n	v	5	E	N	V	5
6	-	-	-	-	-	-	-	-	f	o	w	6	F	O	W	6
7	-	-	-	-	-	-	-	-	g	p	x	7	G	P	X	7
8	-	-	-	-	-	-	-	-	h	q	y	8	H	Q	Y	8
9	-	-	-	-	-	-	-	-	i	r	z	9	I	R	Z	9
A	-	-	-	-	¢	!	-	:	-	-	-	-	-	-	-	|
B	-	-	-	-	.	$	,	#	[	]	└	┘	┴	-	├	-
C	-	-	-	-	<	*	%	@	≤	-	┌	┐	┬	§	┤	-
D	-	-	-	-	(	)	_	'	-	-	[	]	-	-	-	-
E	-	-	-	-	+	;	>	=	-	±	≥	≠	-	-	-	-
F	-	-	-	-	|	¬	?	"	┼	▪	•	—	-	-	-	

Table B - 33. Thai.
(Code Page 838 Dec. - 0346 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ฮ	-	-	-	๐	{	}	\	0
1	-	-	-	-	-	-	/	-	a	j	~	๑	A	J	-	1
2	-	-	-	-	ก	จ	ฎ	ฏ	b	k	s	๒	B	K	S	2
3	-	-	-	-	ข	ฉ	ฐ	ฑ	c	l	t	๓	C	L	T	3
4	-	-	-	-	ฃ	ช	ฒ	ฒ	d	m	u	๔	D	M	U	4
5	-	-	-	-	ค	ซ	ณ	น	e	n	v	๕	E	N	V	5
6	-	-	-	-	ฅ	ฌ	ด	บ	f	o	w	๖	F	O	W	6
7	-	-	-	-	ฆ	ญ	ต	ป	g	p	x	๗	G	P	X	7
8	-	-	-	-	ง	ฎ	ถ	ผ	h	q	y	๘	H	Q	Y	8
9	-	-	-	-	[	]	'	`	i	r	z	๙	I	R	Z	9
A	-	-	-	-	¢	!	:	ฃ	ฯ	ย	ฯ	-	°	ๅ	+
B	-	-	-	-	.	$	,	#	ฬ	ฤ	ล	ะ	ฝ	ไ	ๆ	๛
C	-	-	-	-	<	*	%	@	ฬ	ล	ห	ั	ฝ	ฟ	๋	๏
D	-	-	-	-	(	)	_	'	ภ	ฦ	ฬ	า	ฝ	๊	๎	--
E	-	-	-	-	+	;	>	=	ม	ว	อ	ำ	่	๋	ย	-
F	-	-	-	-	|	¬	?	"	ย	ศ	ฮ	๐	้	๊	๛	

Table B - 34. Latin2/ROECE. (Code Page 870 Dec. - 0366 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ˇ	˘	•	ą	˙	{	}	\	0
1	-	-	-	-		é	/	É	a	j	˛	Ą	A	J	÷	1
2	-	-	-	-	â	ę	Â	Ę	b	k	s	ż	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	Ţ	C	L	T	3
4	-	-	-	-	ţ	ú	˝	Ú	d	m	u	Ż	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	ă	î	Ă	Î	f	o	w	ż	F	O	W	6
7	-	-	-	-	ć	ľ	Ć	Ľ	g	p	x	ź	G	P	X	7
8	-	-	-	-	ç	ĺ	Ç	Ĺ	h	q	y	Ż	H	Q	Y	8
9	-	-	-	-	ć	β	Ć	`	ł	r	z	Ź	I	R	Z	9
A	-	-	-	-	[	]	˛	:	ś	ł	Ś	Ł	-	Ė	đ	Đ
B	-	-	-	-	.	$	,	#	ň	ń	Ň	Ń	ô	ű	Ô	Ű
C	-	-	-	-	<	*	%	@	d	ŝ	Ţ	Š	ö	ü	Ö	Ü
D	-	-	-	-	(	)	_	'	ý	¸	Ý	¨	ŕ	ť	Ŕ	Ť
E	-	-	-	-	+	;	>	=	ř	˛	Ř	´	ó	ú	Ó	Ú
F	-	-	-	-	!	¯	?	"	ş	¤	Ş	×	ő	ë	Ő	

Table B - 35. Cyrillic. (Code Page 880 Dec. - 0370 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	Њ	ц	й	я	ъ	{	}	\	0
1	-	-	-	-		љ	/	ћ	a	j	~	ы	A	J	Я	1
2	-	-	-	-	ђ	њ	Ґ	Ќ	b	k	б	э	B	K	S	2
3	-	-	-	-	ґ	ћ	Ё	-	c	l	t	ш	C	L	T	3
4	-	-	-	-	ё	ќ	Є	Ў	d	m	u	э	D	M	U	4
5	-	-	-	-	є	ў	S	U	e	n	v	щ	E	N	V	5
6	-	-	-	-	s	u	I	ю	f	o	w	ч	F	O	W	6
7	-	-	-	-	i	Ъ	Ї	a	g	p	x	ъ	G	P	X	7
8	-	-	-	-	ї	№	J	б	h	q	y	Ю	H	Q	Y	8
9	-	-	-	-	j	ћ	Љ	`	i	r	z	A	I	Ґ	Z	9
A	-	-	-	-	[	]	¦	:	д	к	р	Б	X	H	T	З
B	-	-	-	-	.	$	,	#	е	л	с	Ц	И	O	У	Ш
C	-	-	-	-	<	*	%	@	ф	м	т	Д	Й	П	Ж	Э
D	-	-	-	-	(	)	_	'	г	н	у	Е	К	Я	В	Щ
E	-	-	-	-	+	;	>	=	х	о	ж	Ф	Л	Р	Ь	Ч
F	-	-	-	-	!	¯	?	"	и	п	в	Г	М	С	Ю	

Table B - 36. Yugoslav. (Code Page 890 Dec. - 037A Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	˙	˘	•	ą	˙	ś	ć	Đ	0
1	-	-	-	-		é	/	É	a	j	č	£	A	J		1
2	-	-	-	-	â	ę	Â	Ę	b	k	s	ż	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	c	l	t	Ţ	C	L	T	3
4	-	-	-	-	à	ů	À	Ů	d	m	u	Ż	D	M	U	4
5	-	-	-	-	á	í	Á	Í	e	n	v	§	E	N	V	5
6	-	-	-	-	ã	î	Ã	Î	f	o	w	`	F	O	W	6
7	-	-	-	-	˝	ľ	˙	Ľ	g	p	x	ź	G	P	X	7
8	-	-	-	-	ç	ĺ	Ç	Ĺ	h	q	y	@	H	Q	Y	8
9	-	-	-	-	Đ	ß	]	ž	i	r	z	Ź	I	R	Z	9
A	~	-	-	-	Ś	Ć	đ	:	ś	ł	Ś	Ł	-	Ě	²	³
B	-	-	-	-	.	Ş	,	#	ň	ń	Ň	Ń	ó	ű	Ó	Ü
C	-	-	-	-	<	*	%	Ż	ë	đ	Ą	ţ	ö	ü	Ö	Ű
D	-	-	-	-	(	)	_	'	ý	¸	Ý	¨	ŕ	ť	Ř	Ť
E	-	-	-	-	+	;	>	=	ř	.	Ř	˙	ó	ú	Ó	Ú
F	-	-	-	-	!	Ć	?	"	ş	ʁ	Ş	ţ	ő	ý	Ő	

Table B - 37. OCR - A.
(Code Page 892 Dec. - 037C Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	-	Ø	-	-	-	{	}	\	0
1	-	-	-	-	-	-	/	-	a	j	-	£	A	J	-	1
2	-	-	-	-	-	-	-	-	b	k	s	¥	B	K	S	2
3	-	-	-	-	-	-	Ä	-	c	l	t	-	C	L	T	3
4	-	-	-	-	-	-	-	-	d	m	u	-	D	M	U	4
5	-	-	-	-	-	-	-	-	e	n	v	-	E	N	V	5
6	-	-	-	-	-	-	-	-	f	o	w	-	F	O	W	6
7	-	-	-	-	-	-	Å	-	g	p	x	-	G	P	X	7
8	-	-	-	-	-	-	-	-	h	q	y	-	H	Q	Y	8
9	-	-	-	-	-	-	Ñ	-	i	r	z	-	I	R	Z	9
A	-	-	-	-	[	]	-	:	-	-	-	-	-	-	-	-
B	-	-	-	-	.	$	,	#	-	-	-	¦	Ä	Ĵ	Ÿ	-
C	-	-	-	-	<	*	%	@	-	-	-	-	-	-	ö	ü
D	-	-	-	-	(	)	-	'	-	-	-	-	-	-	-	-
E	-	-	-	-	+	;	>	=	-	Æ	-	-	-	-	-	-
F	-	-	-	-	!	-	?	"	-	-	-	Æ	-	^	-	

Table B - 38. OCR - B.
(Code Page 893 Dec. - 037D Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	ø	Ø	-	-	-	{	}	\	0
1	-	-	-	-	-	-	/	-	a	j	~	£	A	J	-	1
2	-	-	-	-	-	-	-	-	b	k	s	¥	B	K	S	2
3	-	-	-	-	ä	-	Ä	-	c	l	t	-	C	L	T	3
4	-	-	-	-	-	-	-	-	d	m	u	-	D	M	U	4
5	-	-	-	-	-	-	-	-	e	n	v	§	E	N	V	5
6	-	-	-	-	-	-	-	_	f	o	w	-	F	O	W	6
7	-	-	-	-	å	-	Å	—	g	p	x	-	G	P	X	7
8	-	-	-	-	-	-	-	-	h	q	y	-	H	Q	Y	8
9	-	-	-	-	-	ß	Ñ	`	i	r	z	-	I	R	Z	9
A	-	-	-	-	[	]	-	:	-	-	-	-	-	-	-	-
B	-	-	-	-	.	$	,	#	-	-	-	|	-	-	-	-
C	-	-	-	-	<	*	%	@	-	æ	-	-	ö	ü	ö	Ü
D	-	-	-	-	(	)	_	'	-	,	-	"	-	-	-	-
E	-	-	-	-	+	;	>	=	ü	Æ	-	´	-	-	-	-
F	-	-	-	-	!	^	?	"	Ü	¤	-	■	-	^	-	

Table B - 39. Hebrew. (Code Page 424 Dec. - 01A8 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	-	-	°	µ	'	[	]	\	0
1	-	-	-	-	א	י	/	ת	a	j	~	£	A	J	÷	1
2	-	-	-	-	ב	ך	ע	-	b	k	s	¥	B	K	S	2
3	-	-	-	-	ג	כ	ף	-	c	l	t	·	C	L	T	3
4	-	-	-	-	ד	ל	פ		d	m	u	®	D	M	U	4
5	-	-	-	-	ה	ם	ץ	-	e	n	v	$	E	N	V	5
6	-	-	-	-	ו	מ	צ	-	f	o	w	¶	F	O	W	6
7	-	-	-	-	ז	ן	ק	-	g	p	x	¼	G	P	X	7
8	-	-	-	-	ח	נ	ר	‗	h	q	y	½	H	Q	Y	8
9	-	-	-	-	ט	ס	ש	`	i	r	z	¾	I	R	Z	9
A	-	-	-	-	¢	!	׀	:	«	-	-	[	-	¹	²	³
B	-	-	-	-	.	$	,	#	»	-	-	]	-	-	-	-
C	-	-	-	-	<	*	%	@	-	-	¨	¯	-	-	-	-
D	-	-	-	-	(	)	_	'	-	¸	-	¨	-	-	-	-
E	-	-	-	-	+	;	>	=	-	-	-	´	-	-	-	¨
F	-	-	-	-	|	¬	?	"	±	א	®	x	-	-	-	

Table B - 40. Hebrew. (Code Page 803 Dec. - 0323 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		א	-	ø	Ø	°	µ	¢	[	]	\	0
1	-	-	-	-		é	/	É	ב	ך	¯	£	A	J	÷	1
2	-	-	-	-	â	ê	Â	Ê	ג	כ	ֵ	¥	B	K	S	2
3	-	-	-	-	ä	ë	Ä	Ë	ד	ל	ֶ	·	C	L	T	3
4	-	-	-	-	à	è	À	È	ה	ם	ַ	©	D	M	U	4
5	-	-	-	-	á	i	Á	Í	ו	ן	ָ	§	E	N	V	5
6	-	-	-	-	ã	î	Ã	Î	ז	נ	ֹ	¶	F	O	W	6
7	-	-	-	-	å	ï	Å	Ï	ח	ס	ֻ	¼	G	P	X	7
8	-	-	-	-	ç	ì	Ç	Ì	ט	ף	ִ	½	H	Q	Y	8
9	-	-	-	-	ñ	ß	Ñ	`	י	ץ	ֲ	¾	I	R	Z	9
A	-	-	-	-	$	!	¦	:	«	ª	¡	¬	-	¹	²	³
B	-	-	-	-	.	ש	,	#	»	º	¿	|	Û	Û	Ò	Ù
C	-	-	-	-	<	*	%	@	ð	ם	Ð	¯	ö	ü	Ö	ü
D	-	-	-	-	(	)	_	'	ý	‗	Ý	¨	ò	ù	Ô	Ù
E	-	-	-	-	+	;	>	=	þ	Æ	Þ	´	ó	ú	Ó	Ú
F	-	-	-	-	|	¬	?	"	±	א	®	x	õ	ý	Õ	

Table B - 41. Korean.
(Code Page 833 Dec. - 0341 Hex.)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-	-	-	-		&	-	[	]	-	~	`	{	}	W	0
1	-	-	-	-		-	/	-	a	j	~	-	A	J	-	1
2	-	-	-	-	-	ㅍ	ㅎ	ㅈ	b	k	s	\	B	K	S	2
3	-	-	-	-	ㄱ	ㄹ	ㅁ	ㅉ	c	l	t	-	C	L	T	3
4	-	-	-	-	ㄲ	ㄺ	ㅂ	ㅊ	d	m	u	-	D	M	U	4
5	-	-	-	-	ㄳ	ㅀ	ㅃ	ㅋ	e	n	v	-	E	N	V	5
6	-	-	-	-	ㄴ	ㅄ	ㅅ	ㅌ	f	o	w	~	F	O	W	6
7	-	-	-	-	ㄵ	ㅇ	ㅆ	ㅍ	g	p	x	-	G	P	X	7
8	-	-	-	-	ㄶ	ㅈ	ㅇ	ㅎ	h	q	y	-	H	Q	Y	8
9	-	-	-	-	ㄷ	ㅊ	o	`	i	r	z	-	I	R	Z	9
A	-	-	-	-	¢	!	:	:	ㅏ	ㅐ	ㅛ	—	-	-	-	-
B	-	-	-	-	.	$	,	#	ㅓ	ㅔ	ㅜ	ㅓ	-	-	-	-
C	-	-	-	-	<	*	%	@	ㅑ	ㅗ	ㅒ	ㅣ	-	-	-	-
D	-	-	-	-	(	)	_	'	ㅕ	ㅓ	ㅝ	-	-	-	-	-
E	-	-	-	-	+	;	>	=	ㅓ	ㅖ	ㅟ	-	-	-	-	-
F	-	-	-	-	|	¬	?	"	ㅔ	ㅓ	ㅠ	-	-	-	-	

ASCII Mode Character Set tables

Italic Character Set (EPSON Mode only)

EPSON STD Italic Character Set of USA

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00	NUL		SP	0	@	P	`	p	NUL		SP	*0*	*@*	*P*	*`*	*p*
01		DC1	!	1	A	Q	a	q		DC1	*!*	*1*	*A*	*Q*	*a*	*q*
02		DC2	"	2	B	R	b	r		DC2	*"*	*2*	*B*	*R*	*b*	*r*
03		DC3	#	3	C	S	c	s		DC3	*#*	*3*	*C*	*S*	*c*	*s*
04		DC4	$	4	D	T	d	t		DC4	*$*	*4*	*D*	*T*	*d*	*t*
05			%	5	E	U	e	u			*%*	*5*	*E*	*U*	*e*	*u*
06			&	6	F	V	f	v			*&*	*6*	*F*	*V*	*f*	*v*
07	BEL		'	7	G	W	g	w	BEL		*'*	*7*	*G*	*W*	*g*	*w*
08	BS	CAN	(	8	H	X	h	x	BS	CAN	*(*	*8*	*H*	*X*	*h*	*x*
09	HT		)	9	I	Y	i	y	HT		*)*	*9*	*I*	*Y*	*i*	*y*
0A	LF		*	:	J	Z	j	z	LF		*	*:*	*J*	*Z*	*j*	*z*
0B	VT	ESC	+	;	K	[	k	{	VT	ESC	+	*;*	*K*	*[*	*k*	*{*
0C	FF		,	<	L	\	l	|	FF		,	<	*L*	\	*l*	|
0D	CR		-	=	M	]	m	}	CR		-	=	*M*	*]*	*m*	}
0E	SO		.	>	N	^	n	~	SO		.	>	*N*	^	*n*	~
0F	SI		/	?	O	_	o	DEL	SI		/	?	*O*	_	o	

Character Set 1

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00	NUL		SP	0	@	P	`	p	NUL		á	▒	└	╨	α	≡
01		DC1	!	1	A	Q	a	q		DC1	í	▓	┴	╤	β	±
02		DC2	"	2	B	R	b	r		DC2	ó	▓	┬	╥	Γ	≥
03		DC3	#	3	C	S	c	s		DC3	ú	│	├	╙	π	≤
04		DC4	$	4	D	T	d	t		DC4	ñ	┤	─	╘	Σ	⌠
05			%	5	E	U	e	u			Ñ	╡	┼	╒	σ	⌡
06			&	6	F	V	f	v			ª	╢	╞	╓	μ	÷
07	BEL		'	7	G	W	g	w	BEL		º	╖	╟	╫	τ	≈
08	BS	CAN	(	8	H	X	h	x	BS	CAN	¿	╕	╚	╪	Φ	°
09	HT		)	9	I	Y	i	y	HT		⌐	╣	╔	┘	Θ	∙
0A	LF		*	:	J	Z	j	z	LF		¬	║	╩	┌	Ω	·
0B	VT	ESC	+	;	K	[	k	{	VT	ESC	½	╗	╦	█	δ	√
0C	FF		,	<	L	\	l	|	FF		¼	╝	╠	▄	∞	η
0D	CR		-	=	M	]	m	}	CR		¡	╜	═	▌	φ	²
0E	SO		.	>	N	^	n	~	SO		«	╛	╬	▐	∈	■
0F	SI		/	?	O	_	o	DEL	SI		»	┐	╧	▀	∩	SP

Character Set 2

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00	NUL		SP	0	@	P	`	p	Ç	É	á	▒	└	╨	α	≡
01		DC1	!	1	A	Q	a	q	ü	æ	í	▓	┴	╤	β	±
02		DC2	"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
03	♥	DC3	#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
04	♦	DC4	$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
05	♣		%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
06	♠		&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
07	BEL		'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
08	BS	CAN	(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
09	HT		)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	∙
0A	LF		*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
0B	VT	ESC	+	;	K	[	k	{	ï	¢	½	╗	╤	▉	δ	√
0C	FF		,	<	L	\	l	|	î	£	¼	╝	╠	▄	∞	η
0D	CR		-	=	M	]	m	}	ì	¥	¡	╜	═	▌	φ	²
0E	SO		.	>	N	^	n	~	Ä	₧	«	╛	╬	▐	ε	■
0F	SI		/	?	O	_	o	DEL	Å	ƒ	»	┐	╧	▀	∩	SP

IBM PC Character Set (All Printable Character Table)

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00	Ø	►		0	@	P	`	p	Ç	É	á	▒	└	╨	α	■
01	☺	◄	!	1	A	Q	a	q	ü	æ	í	▓	┴	╤	β	±
02	●	↕	"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
03	♥	‼	#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
04	♦	¶	$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
05	♣	§	%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
06	♠	▬	&	6	F	V	f	v	å	û	ª	╢	╞	╓	µ	÷
07	•	↨	'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
08	◘	↑	(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
09	○	↓	)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	∙
0A	◙	→	*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
0B	♂	←	+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
0C	♀	∟	,	<	L	\	l	|	î	£	¼	╝	╠	▄	∞	η
0D	♪	↔	-	=	M	]	m	}	ì	¥	¡	╜	═	▌	φ	²
0E	♫	▲	.	>	N	^	n	~	Ä	₧	«	╛	╬	▐	ε	■
0F	☼	▼	/	?	O	_	o		Å	ƒ	»	┐	╧	▀	∩	SP

IBM National Variations

CP 437 (USA)

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00	NUL		SP	0	@	P	`	p	Ç	É	á	⣿	└	╨	α	■
01		DC1	!	1	A	Q	a	q	ü	æ	í	⣿	┴	╤	ß	±
02		DC2	"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
03	♥	DC3	#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
04	♦	DC4	$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
05	♣		%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
06	♠		&	6	F	V	f	v	å	û	ª	╢	╞	╓	μ	÷
07	BEL		'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
08	BS	CAN	(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
09	HT		)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	∙
0A	LF		*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
0B	VT	ESC	+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
0C	FF		,	<	L	\	l	|	î	£	¼	╝	╠	▄	∞	η
0D	CR		-	=	M	]	m	}	ì	¥	¡	╜	═	▌	φ	²
0E	SO		.	>	N	^	n	~	Ä	₧	«	╛	╬	▐	ε	■
0F	SI		/	?	O	_	o	DEL	Å	ƒ	»	┐	╧	▀	∩	SP

CP 850 (MULTILINGUAL)

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00	NUL		SP	0	@	P	`	p	Ç	É	á	▒	└	ð	Ó	-
01		DC1	!	1	A	Q	a	q	ü	æ	í	▓	┴	Ð	ß	±
02		DC2	"	2	B	R	b	r	é	Æ	ó	▓	┬	Ê	Ô	‗
03	♥	DC3	#	3	C	S	c	s	â	ô	ú	│	├	Ë	Ò	¾
04	♦	DC4	$	4	D	T	d	t	ä	ö	ñ	┤	─	È	õ	¶
05	♣		%	5	E	U	e	u	à	ò	Ñ	Á	┼	ı	Õ	§
06	♠		&	6	F	V	f	v	å	û	ª	Â	ã	Í	µ	÷
07	BEL		'	7	G	W	g	w	ç	ù	º	À	Ã	Î	Þ	¸
08	BS	CAN	(	8	H	X	h	x	ê	ÿ	¿	©	╚	Ï	þ	°
09	HT		)	9	I	Y	i	y	ë	Ö	®	╣	╔	┘	Ú	¨
0A	LF		*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Û	·
0B	VT	ESC	+	;	K	[	k	{	ï	ø	½	╗	╦	█	Ù	¹
0C	FF		,	<	L	\	l	|	î	£	¼	╝	╠	▄	ý	³
0D	CR		-	=	M	]	m	}	ì	Ø	¡	¢	═	¦	Ý	²
0E	SO		.	>	N	^	n	~	Ä	×	«	¥	╬	Ì	¯	■
0F	SI		/	?	O	_	o	DEL	Å	ƒ	»	┐	¤	▀	´	SP

CP 860 (Portugal)

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00	NUL		SP	0	@	P	`	p	Ç	É	á	⣿	└	╨	α	≡
01		DC1	!	1	A	Q	a	q	ü	À	í	▒	┴	╤	ß	±
02		DC2	"	2	B	R	b	r	é	È	ó	▓	┬	╥	Γ	≥
03	♥	DC3	#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
04	♦	DC4	$	4	D	T	d	t	ã	õ	ñ	┤	─	╘	Σ	⌠
05	♣		%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
06	♠		&	6	F	V	f	v	Á	Ú	ª	╢	╞	╓	µ	÷
07	BEL		'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
08	BS	CAN	(	8	H	X	h	x	ê	Ì	¿	╕	╚	╪	Φ	°
09	HT		)	9	I	Y	i	y	Ê	Õ	Ò	╣	╔	┘	Θ	•
0A	LF		*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
0B	VT	ESC	+	;	K	[	k	{	Ì	¢	½	╗	╦	█	δ	√
0C	FF		,	<	L	\	l	|	Ô	£	¼	╝	╠	▄	∞	n
0D	CR		-	=	M	]	m	}	ì	Ù	¡	╜	═	▌	φ	²
0E	SO		.	>	N	^	n	~	Ã	₧	«	╛	╬	▐	ε	■
0F	SI		/	?	O	_	o	DEL	Â	Ó	»	┐	╧	▀	∩	SP

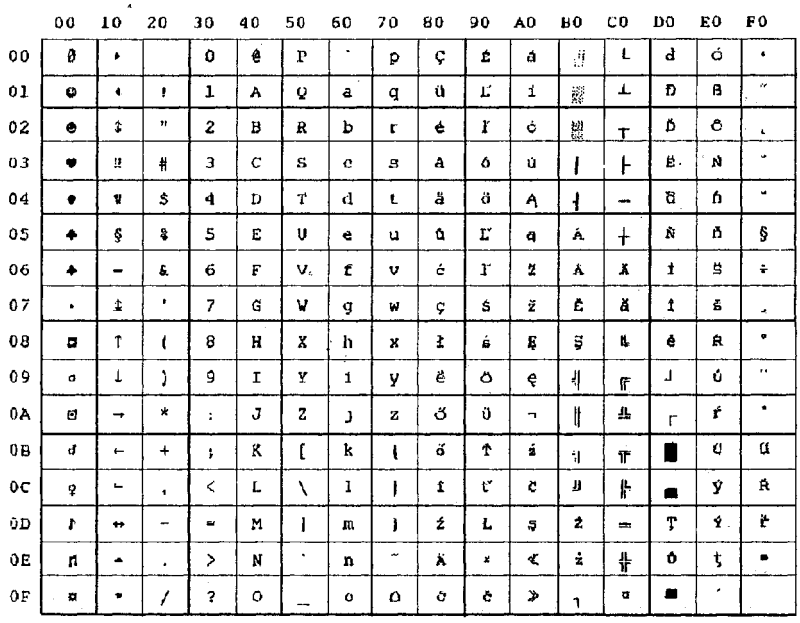
CP 863 (France/Canada)

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00	NUL		SP	0	@	P	`	p	Ç	É	¦	⣿	└	╨	α	≡
01		DC1	!	1	A	Q	a	q	ü	È	´	▒	┴	╤	β	±
02		DC2	"	2	B	R	b	r	é	Ê	ó	▓	┬	╥	Γ	≥
03	♥	DC3	#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
04	♦	DC4	$	4	D	T	d	t	Â	Ë	¨	┤	─	╘	Σ	⌠
05	♣		%	5	E	U	e	u	à	Ï	¸	╡	┼	╒	σ	⌡
06	♠		&	6	F	V	f	v	¶	û	³	╢	╞	╓	μ	÷
07	BEL		'	7	G	W	g	w	ç	ú	´	╖	╟	╫	τ	≈
08	BS	CAN	(	8	H	X	h	x	ê	¤	Î	╕	╚	╪	Φ	°
09	HT		)	9	I	Y	i	y	ë	Ô	⌐	╣	╔	┘	Θ	•
0A	LF		*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
0B	VT	ESC	+	;	K	[	k	{	ï	¢	½	╗	╦	█	δ	√
0C	FF		,	<	L	\	l	|	î	£	¼	╝	╠	▄	∞	n
0D	CR		-	=	M	]	m	}	=	Ù	¾	╜	═	▌	φ	²
0E	SO		.	>	N	^	n	~	À	Û	«	╛	╬	▐	ε	■
0F	SI		/	?	O	_	o	DEL	§	ƒ	»	┐	╧	▀	∩	SP

CP865 (Denmark/Norway)

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00	NUL		SP	0	@	P	`	p	Ç	É	á	▒	└	╨	α	≡
01		DC1	!	1	A	Q	a	q	ü	æ	í	▓	┴	╤	β	±
02		DC2	"	2	B	R	b	r	é	Æ	ó	▓	┬	╥	Γ	≥
03	♥	DC3	#	3	C	S	c	s	â	ô	ú	│	├	╙	π	≤
04	♦	DC4	$	4	D	T	d	t	ä	ö	ñ	┤	─	╘	Σ	⌠
05	♣		%	5	E	U	e	u	à	ò	Ñ	╡	┼	╒	σ	⌡
06	♠		&	6	F	V	f	v	å	û	ª	╢	╞	╓	μ	÷
07	BEL		'	7	G	W	g	w	ç	ù	º	╖	╟	╫	τ	≈
08	BS	CAN	(	8	H	X	h	x	ê	ÿ	¿	╕	╚	╪	Φ	°
09	HT		)	9	I	Y	i	y	ë	Ö	⌐	╣	╔	┘	Θ	•
0A	LF		*	:	J	Z	j	z	è	Ü	¬	║	╩	┌	Ω	·
0B	VT	ESC	+	;	K	[	k	{	ï	ø	½	╗	╦	█	δ	√
0C	FF		,	<	L	\	l	|	î	£	¼	╝	╠	▄	∞	n
0D	CR		-	=	M	]	m	}	ì	Ø	¡	╜	═	▌	φ	²
0E	SO		.	>	N	^	n	~	Ä	₧	«	╛	╬	▐	ε	■
0F	SI		/	?	O	_	o	DEL	Å	ƒ	¤	┐	╧	▀	∩	SP

CP852 (All Printable Nation)



	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00	Ø	▸		0	@	P	`	p	Ç	É	á	░	└	đ	Ó	˙
01	☺	◂	!	1	A	Q	a	q	ü	Ĺ	í	▒	┴	Đ	ß	˝
02	☻	↕	"	2	B	R	b	r	é	ĺ	ó	▓	┬	Ď	Ô	˛
03	♥	‼	#	3	C	S	c	s	â	ô	ú	│	├	Ë	Ń	ˇ
04	♦	¶	$	4	D	T	d	t	ä	ö	Ą	┤	─	ď	ń	˘
05	♣	§	%	5	E	U	e	u	ů	Ľ	ą	Á	┼	Ň	ň	§
06	♠	▬	&	6	F	V	f	v	ć	ľ	Ž	Â	╞	Í	Š	÷
07	•	↨	'	7	G	W	g	w	ç	Ś	ž	Ě	╟	î	š	¸
08	◘	↑	(	8	H	X	h	x	ł	ś	Ę	ŝ	╚	ě	Ř	°
09	○	↓	)	9	I	Y	i	y	ë	Ö	ę	╣	╔	┘	ú	¨
0A	◙	→	*	:	J	Z	j	z	ő	Ü	¬	║	╩	┌	ŕ	·
0B	♂	←	+	;	K	[	k	{	ő	Ť	ź	╗	╦	█	Ű	ű
0C	♀	∟	,	<	L	\	l	|	î	č	Ď	╝	╠	▄	ý	Ř
0D	♪	↔	-	=	M	]	m	}	ź	Ł	ş	Ż	═	Ţ	Ý	ř
0E	♫	▲	.	>	N	^	n	~	Ä	×	Ć	ż	╬	Ů	ţ	■
0F	☼	▼	/	?	O	_	o	⌂	ć	č	»	┐	¤	▀	´	

EX-800 NATIONAL CHARACTER SETS

Hex. Dec.	23 35	24 36	40 64	5B 91	5C 92	5D 93	5E 94	60 96	7B 123	7C 124	7D 125	7E 126
USA	#	$	@	[	\	]	^	`	{	|	}	~
France			à	°	ç	§			é	ù	è	"
Germany			§	Ä	Ö	Ü			ä	ö	ü	ß
UK	£											
Denmark-1		¡		Æ	Ø	Å			æ	ø	å	
Sweden		¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü
Italy				°	\	é		ù	à	ò	è	ì
Spain-1	Pt			¡	Ñ	¿			"	ñ	}	
Japan					¥							
Norway		¤	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
Denmark-2			É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
Spain-2			á	¡	Ñ	¿	é		í	ñ	ó	ú
Latin America			á	¡	Ñ	¿	é	ü	í	ñ	ó	ú

ISO 8859/1 (CS2)

CHARACTER SET = CS2, NATION = ISO 8859/1

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00				0	@	P		p				°	À	Ð	à	ð
01			!	1	A	Q	a	q			¡	±	Á	Ñ	á	ñ
02			"	2	B	R	b	r			¢	²	Â	Ò	â	ò
03			#	3	C	S	c	s			£	³	Ã	Ó	ã	ó
04			$	4	D	T	d	t			¤	´	Ä	Ô	ä	ô
05			%	5	E	U	e	u			¥	µ	Å	Õ	å	õ
06			&	6	F	V	f	v			¦	¶	Æ	Ö	æ	ö
07			'	7	G	W	g	w			§	·	Ç	×	ç	÷
08			(	8	H	X	h	x			¨	¸	È	Ø	è	ø
09			)	9	I	Y	i	y			©	¹	É	Ù	é	ù
0A			*	:	J	Z	j	z			ª	º	Ê	Ú	ê	ú
0B			+	;	K	[	k	{			«	»	Ë	Û	ë	û
0C			,	<	L	\	l	|			¬	¼	Ì	Ü	ì	ü
0D			-	=	M	]	m	}				½	Í	Ý	í	ý
0E			.	>	N	^	n	~			®	¾	Î	Þ	î	þ
0F			/	?	O	_	o				¯	¿	Ï	ß	ï	ÿ

ISO 8859/2 (CS2)

CHARACTER SET = CS2, NATION = ISO 8859/2

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00				0	@	P	`	p				°	Ŕ	Đ	ŕ	đ
01			!	1	A	Q	a	q			Ą	ą	Á	Ń	á	ń
02			"	2	B	R	b	r			˘	˛	Â	Ň	â	ň
03			#	3	C	S	c	s			Ł	ł	Ă	Ó	ă	ó
04			$	4	D	T	d	t			¤	´	Ä	Ô	ä	ô
05			%	5	E	U	e	u			Ľ	ľ	Ĺ	Ő	ĺ	ő
06			&	6	F	V	f	v			Ś	ś	ć	Ö	ć	ö
07			'	7	G	W	g	w			§	ˇ	Ç	×	ç	÷
08			(	8	H	X	h	x			¨	¸	č	Ř	č	ř
09			)	9	I	Y	i	y			Š	š	É	Ů	é	ů
0A			*	:	J	Z	j	z			Ş	ş	Ę	Ú	ę	ú
0B			+	;	K	[	k	{			Ť	ť	Ë	Ű	ë	ű
0C			,	<	L	\	l	|			Ź	ź	Ě	Ü	ě	ü
0D			-	=	M	]	m	}				˝	Í	Ý	í	ý
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Message Summary

This appendix contains a list of error and warning messages which may appear on the display when a particular condition occurs. Then, you can find a language message summary for the each national personalization available on the panel (France, Italia, Deutch and España).

Message Summary C.2
Error Messages C.2
Warning Messages C.3

Language Message Summary C.6
French Messages C.6
Italian Messages C.14
German Messages C.23
Spanish Messages C.31

Message Summary

Error Messages

The fatal error display configuration has the following structure:

999	***Error Message***

where:

999 identifies the fatal error display

Error Message error type description

The fatal error display are the following (in alphabetical order):

ENGINE ERROR

999	***ENGINE ERROR***

INTERNAL I/F ERROR

999	***INTERNAL I/F ERROR***

INTERPRETER ERROR

999	***INTERPRETER ERROR***

LINK ERROR

999	***LINK ERROR***

PRINT ADAPTER ERROR

999	***PRINT ADAPTER ERROR***

RASTER ERROR

999	***RASTER ERROR***

SUPERVISOR ERROR

999	***SUPERVISOR ERROR***

Warning Messages

The warning display configuration appears as follows:

n1 EXIT	*Warning Message*

↓

Press it to leave the warning condition

and where:

n1 is the warning code

Warning Message warning type description

or without the warning code:

 EXIT	*Warning Message*

↓

Leaves the warning condition

If EXIT does not appear, the warning display configuration will be automatically left after few seconds.

The available warning information is:

01	PAPER OUT
02	PAPER JAM
02	PAPER JAM ON REAR PATH
02	PAPER JAM ON BOTTOM PATH
03	DOC ON DEMAND EJECTED
06	HOST REQUESTS ATTENTION (model TA1 only)
10	PLEASE LOAD CUT SHEET NOW
* 10	PLEASE LOAD CUT SHEET NOW (* means Bin redirected on MSF)
13	BIN 1 EMPTY
13	BIN 2 EMPTY
13	BOTH BINS EMPTY
14	INVALID FORM SELECTION
15	LINE CHECK
17	PARITY ERROR
22	ADDRESS NOT RECEIVED
27	BUFFER PRINT MODE ACTIVE
51	AGA NOT OPERATING
51	ADJUST GAP MANUALLY
52	PRINTER SET-UP FAILURE
67	INVALID GRAPHIC CHARACTER
68	CLEAR COMMAND RECEIVED
69	DATA POSSIBLY LOST
89	RIBBON JAM
Ax	ACTIVE PRINTER ADDRESS (where x is 0 to 6)
Axx	APPLICATION CHECK (model TA1 only)

A89	INVALID CODE POINT "00" FOR LAC (model TA1 only)
A8C	INVALID MPL (113.77 INCHES) (model TA1 only)
A97	GRAPHIC CHECK (model TA1 only)

and

COVER OPEN

COVER OPEN. PLEASE CLOSE IT!

CUSTOM SET # x LOADED

CUSTOM SET # x SAVED

DEV INFO SAVED

ERROR TRIMMING BOTTOM JAM SENSOR

ERROR TRIMMING REAR JAM SENSOR

FEED AND/OR PATH CHANGED

LOADING NOT ALLOWED NOW

NEW POR SAVED

PLEASE REMOVE CUT SHEET

RECEIVING DATA

PLEASE REMOVE PAPER FROM BOTTOM PATH

PLEASE REMOVE PAPER FROM REAR PATH

S/N SAVED

Language Message Summary

French Messages

Messages d'erreur

INTERNAL I/F ERROR	ERREUR INTERFACE INTERNE
SUPERVISOR ERROR	ERREUR SUPERVISEUR
RASTER ERROR	ERREUR DE TRAME
PRINT ADAPTER ERROR	ERREUR PRINT ADAPTATEUR
INTERPRETER ERROR	ERREUR INTERPRETER
ENGINE ERROR	ERREUR MACHINE
LINK ERROR	ERREUR PROTOCOLE

Messages Basic Assurance Test (BAT)

RUNNING INTERNAL BAT TESTS	BATTERIE DE TEST INTERNE ACTIF
ACTIVE PRINTER ADDRESS	ADRESSE IMPRIMANTE ACTIVE
CUSTOM SET LOADED AT POR	CONFIGURATION CHARGEE A LA MST

Messages d'avertissement

01 PAPER OUT	FIN DE PAPIER
02 PAPER JAM	BOURRAGE PAPIER
02 PAPER JAM ON REAR PATH	BOURRAGE PAPIER SUR CHEMIN ARRIER
02 PAPER JAM ON BOTTOM PATH	BOURRAGE PAPIER SUR CHEMIN FOND
03 DOC ON DEMAND EJECTED	DOCUMENT A LA DEMANDE EJECTE
06 HOST REQUEST ATTENTION	HOST REQUIERT ATTENTION
10 PLEASE LOAD CUT SHEET NOW	INTRODUIRE UNE FEUILLE MANUEL
**10 PLEASE LOAD CUT SHEET NOW*	INTRODUIRE UNE FEUILLE MANUEL

13 BIN 1 EMPTY	BAC 1 VIDE
13 BIN 2 EMPTY	BAC 2 VIDE
13 BOTH BINS EMPTY	ENSEMBLE BAC VIDE
14 INVALID FORM SELECTION	CHOIX DE FORMULAIRE INVALIDE
15 LINE CHECK	PROBLEME DE LIGNE
17 PARITY ERROR	ERREUR DE PARITE
22 ADDRESS NOT RECEIVED	ADRESSE NON RECUE
27 BUFFER PRINT MODE ACTIVE	IMPRESSION BUFFER ACTIVE
51 AGA NOT OPERATING	AGA NON OPERATIONEL
51 ADJUST GAP MANUALLY	REGLAGE INTERVALLE MANUEL
52 PRINTER SET-UP FAILURE	ERREUR CONFIGURATION IMPRIMANTE
67 INVALID GRAPHIC CHARACTER	CARACTERE GRAPHIQUE INVALIDE
68 CLEAR COMMAND RECEIVED	COMMANDE CLEAR RECUE
69 DATA POSSIBLY LOST	PERTE DE DONNEE EVENTUELLE
89 RIBBON JAM	PROBLEME RUBAN
Axx APPLICATION CHECK	ERREUR APPLICATION
A89 INVALID CODE POINT "00" FOR LAC	CODE POINT "00" INVALIDE POUR LAC
A8C INVALID MPL (113.77 INCHES)	LONGUEUR PAGE INVALIDE (113.77")
A97 GRAPHIC CHECK	ERREUR CARACTERE GRAPHIQUE
and	et
COVER OPEN	CAPOT OUVERT
COVER OPEN. PLEASE CLOSE IT!	CAPOT OUVERT. LE FERMER SVP!
CUSTOM SET # X LOADED	CONFIGURATION # X CHARGEE
CUSTOM SET # X SAVED	CONFIGURATION # X SAUVEGARDEE
DEV INFO SAVED	INFO IMPRIMANTE SAUVEGARDEE
ERROR TRIMMING BOTTOM JAM SENSOR	ERREUR REGLAGE CELLULE FOND
ERROR TRIMMING REAR JAM SENSOR	ERREUR REGLAGE CELLULE ARRIER
FEED AND/OR PATH CHANGED	ALIMENTATION ET/OU CHEMIN CHANGE

LOADING NOT ALLOWED NOW!	CHARGEMENT NON AUTORISE MAINTENANT
NEW POR SAVED	NOUVELLE MST SAUVEGARDEE
PLEASE REMOVE CUT SHEET	ENVELER LA FEUILLE SVP!
RECEIVING DATA	DONNEÈS ACCEPTEES
PLEASE REMOVE PAPER FROM BOTTOM PATH	RETIRER LE PAPIER DU CHEMIN FOND
PLEASE REMOVE PAPER FROM REAR PATH	RETIRER LE PAPIER DU CHEMIN ARRIER

Messages d'utilisation du papier

PAPER-KNOB	LEVIER PAPIER
UP	UP
DOWN	DOWN
EXIT	EXIT
QUIET	SOURD
CANCEL	CANCEL
PAPER EMPTY	ABSENCE DE PAPIER
CURRENT PATH:	CHEMIN PAPIER:
START	START
P.ALGN	P.ALGN
FEED	ALIM.
F1	F1
F2	F2
F3	F3
F4	F4
REAR	ARRIER
BOTTOM	FOND
MSF	MSF
ASF1	BAC1
ASF2	BAC2
ASF3	BAC3
MANUAL	MANUEL
LABELS	ETIQ.
QCKRDY	PRTRAP
PATH	CHEMIN

SELECT	CHOIX
TOF SET	TOF SET
PRINT\ADJUST	IMP.\REGLAG
FANFLD PARK	LISTIN PARK
PAPER CHANGE	PAPIER CHANGE
FORM-	PAGE-
DF-BIN	DF-BAC
BIN1	BAC1
BIN2	BAC2
BIN3	BAC3
LOAD	CHARGE
EJECT	EJECTE
LINE-	LIGNE-
TEAR-	COUPE-
TEAR	COUPE
*TEAR**	COUPE*
PLEASE CONFIRM	CONFIRMATION SVP

Messages d'alignement

TEAR	COUPE
REAR	ARRIER
BOTTOM	FOND
BIDIR1	BIDIR1
BIDIR2	BIDIR2
BIDIR3	BIDIR3
VALUE	VALEUR
VERIFY	VERIF.
SENSOR	CELLUL

Messages de reglage de la position d'impression

H....H PRINT	H....H IMP
UP	UP
DOWN	DOWN
LEFT	GAUCHE
RIGHT	DROITE

V/LM	V/MS
V ADJ	REG V
LM ADJ	REG MS
GAP ADJUST	INTRVL REGLAG
EXIT	EXIT

Messages de reglage GAP

H....H PRINT	H....H IMP
MANUAL	MANUEL
FIXED	FIXE
AUTO	AUTO
UP	UP
DOWN	DOWN
SELECT	CHOIX
SAVE	SAUVER
EXIT	EXIT

Messages Config & Test

CONFIG & TEST	CONFIG & TEST
EXIT	EXIT
CANCEL	CANCEL
I/F MENU	I/F MENU
TEST MENU	TEST MENU
HELP MENU	AIDE MENU
CONFIG MENU	CONFIG MENU

Messages de test

TEST MODE	MODE TEST
PRINT SET-UP VALUES	IMP.CONFIGURATION
SELF TEST	SELF TEST
TEST & DIAGNOSTICS	TEST & DIAGNOSTICS
I/F BUFFER HEX DUMP	BUFFER HEX DUMP
INTERNAL DATA MONIT.	INTERNAL DATA MONIT.

TEST SCROLL	TEST PAGINE
START	START
TEST RUNNING !!!!	TEST EN COURS !!!!

Messages d'aide

EXIT	EXIT
CONFIG SHOW	CONFIG DEMO
CONFIG PRINT	CONFIG IMP
OPERAT PRINT	OPERAT IMP
MAINTN PRINT	MAINTN IMP
BUFFER PRINT	BUFFER IMP
PRINTING !!!!	IMPRESSION !!!!
SET-UP VALUES	VALEUR CONFIGURATION
OPERATOR HELP	AIDE OPERATEUR
MAINTENANCE HELP	AIDE MAINTENANCE
MICRO-CODE VERSIONS	MICRO-CODE VERSIONS

Messages generaux

EXIT	EXIT
MORE	PLUS
YES	OUI
NO	NON

Messages de configuration

SETUP EXIT	CONFG EXIT
UP	UP
DOWN	DOWN
DFLT MFG	DEFAUT USINE
I/F SELECT	CHOIX I/F
TWINAX	TWINAX
ASCII	ASCII
AUTOSWITCH	DYNAMIQUE
FF AT EOJ	FF A EOJ
EOJ T.OUT	DELAI EOJ

SEC.	SEC.
BUFFER	BUFFER
DATA BITS	DATA BITS
SELECTIN	SELECTION
ON	ON
HOST	HOST
ACK MODE	ACK MODE
INSIDE	INTERNE
DURING	PENDANT
OUTSIDE	EXTERNE
ADDRESS	ADRESSE
FEED	ALIM.PAPIER
F1(CFD)	F1(CFD)
F2(DOD)	F2(DOD)
F3(DID)	F3(DID)
F4(ASF)	F4(BAC)
BEEP	BEEP SONORE
OFF	INACTIF
ON	ACTIF
ASF SELEC	CHOIX BAC
DEFLT BIN	BAC/DEFAUT
VIA HOST	VIA HOST
DEFLT BIN	BAC/DEFAUT
MANUAL	MANUEL
BIN1	BAC1
BIN2	BAC2
BIN LINK	LIEN DE BAC
B.C PRINT	IMP.B.C.
GRA PRINT	IMP.GRAPH
TXT PRINT	IMP.TEXT
BIDIR	BIDIR
UNIDIR	UNIDIR
QUALITY	QUALITE
FAST & DP	RAPIDE TEXT
TEXT	TEXTE
NLQ	COURRIER
CPI	CAR./POUCE

MPP	CAR./LIGNE
LPI	LIGNE/POUCE
MPL	LIGNE/PAGE
LFT MARGN	MARG.GAUCHE
TOP MARGN	MARGE HAUTE
PAGE	PAGE
FULL	PLEINE
PARTIAL	PARTIELLE
PANEL LANG	PANEL LANG
USA-UK	USA-UK
DEUTCH	DEUTCH
FRANCE	FRANCE
ITALIA	ITALIA
ESPANA	ESPANA
CODE PAGE	CODE PAGE
00 MULTI	00 MULTI
01 US	01 US
02 GERMAN	02 ALLEMAND
03 BELGIAN	03 BELGE
04 BRAZIL	04 BRESIL
05 CANADA	05 CANADIEN
06 DAN/NOR	06 DAN/NOR
07 FIN/SWE	07 FIN/SUE
08 FRENCH	08 FRANCAIS
09 ITALIAN	09 ITALIEN
10 JAPAN	10 JAPONAIS
11 KATAKAN	11 KATAKANA
12 PORTUG	12 PORTUG.
13 SPANISH	13 ESPAGNOL
14 SPN SPK	14 ESP PARL
15 UK	15 ANGLAIS
89 KOREAN	89 COREEN
90 ICELAND	90 ISLAND
91 LATIN 2	91 LATIN 2
92 YUGOSLV	92 YOUGSLV
93 TURKISH	93 TURC
94 OLD GRE	94 GRC ANC

95 CYRILIC	95 CYRILIC
96 HEBREW	96 HEBREW
97 ARABIC	97 ARABE
98 THAI	98 THAI
99 NEW GRE	99 GREC
4224 MODE	4224 MODE
PERFORMAN	PERFORMANCE
000 BC GR	000 BC GR
001 BC gr	001 BC gr
002 bc GR	002 bc GR
003 bc gr	003 bc gr
004 HOST	004 HOST
TRANSPRNT	TRANSPARENT
DISABLE	INACTIF
ENABLE	ACTIF
TRANS SEQ	CAR. TRANS.
1.ST	1.ER
2.ND	2.ND
LABELS	ETIQUETTES
DOD-EJECT	DOD-EJECTE
IMMEDIATE	IMMEDIAT
DEL'D EOF	FIN DE PAGE
DID-EJECT	DID-EJECTE
TOF=TM	TOF=TM
AUTO TOF	TOF AUTO.
ASF TYPE	TYPE DE BAC
SNGL BIN	SIMPLE BAC
DUAL BIN	DOUBLE BAC
ASF3REDIR	REDIR BAC 3
ASF3MANU	BAC3>MAN.
ASF3BIN1	BAC3>BAC1
ASF3BIN2	BAC3>BAC2
QUICK RDY	PRET RAPIDE
ONLINE FF	FF EN LIGNE
RIBBON	RUBAN
BLACK	NOIR
8 COLOR	8 COULEURS

4 COLOR	4 COULEURS
QUIT!	FIN!
RESTOR	RESTOR
SAVE!	SAUVER
LOAD	CHARGE
BACK	RETOUR
CHANGES WERE MADE!	DES MODIFS. ONT ETE FAITES!
EMULATION	EMULATION
PROPRINTER	PROPRINTER
EPSON	EPSON
CHAR. SET	CHAR. SET
CS2	CS2
CS1	CS1
SLANT	SLANT
NATION	NATION
LATIN-1	LATIN-1
LATIN-2	LATIN-2
USA	USA
FRANCE	FRANCE
GERMANY	GERMANY
UK	UK
DENMARK-1	DENMARK-1
SWEDEN	SWEDEN
ITALY	ITALY
SPAIN-1	SPAIN-1
JAPAN	JAPAN
NORWAY	NORWAY
DENMARK-2	DENMARK-2
SPAIN-2	SPAIN-2
LATIN AMER.	LATIN AMER.
LATIN-1	LATIN-1
LATIN-2	LATIN-2
NLQ FONT	NLQ FONT
SKIPOVER	SKIPOVER
LF ON CR	LF ON CR
HOST	HOST
CR ON LF	CR ON LF

ZERO SLASH	ZERO SLASH
HOST COMPR.	HOST COMPR.

Italian Messages

Messaggi di errore

INTERNAL I/F ERROR	ERRORE INTERNO DI I/F
SUPERVISOR ERROR	ERRORE DI SUPERVISORE
RASTER ERROR	ERRORE DI RETICOLO
PRINT ADAPTER ERROR	ERRORE DELL'ADATTATORE PRINTER
INTERPRETER ERROR	ERRORE DELL'INTERPRETE
ENGINE ERROR	ERRORE DI MACCHINA
LINK ERROR	ERRORE DI COLLEGAMENTO

Messaggi dei BAT (Basic Assurance Tests)

RUNNING INTERNAL BAT TESTS	ESECUZIONE BAT TEST
ACTIVE PRINTER ADDRESS	INDIRIZZO DELLA PRINTER
CUSTOM SET LOADED AT POR	PERSONAL. CARICATA ALL'ACCENSIONE

Messaggi di avvertimento

01 PAPER OUT	FINE CARTA
02 PAPER JAM	INCEPPAMENTO CARTA
02 PAPER JAM ON REAR PATH	INCEPPAMENTO CARTA SU CAMMINO POSTER.
02 PAPER JAM ON BOTTOM PATH	INCEPPAMENTO CARTA SU CAMMINO INFER.
03 DOC ON DEMAND EJECTED	RICHIESTA DOCUM ATTIVA
06 HOST REQUEST ATTENTION	HOST RICHIEDE ATTENZIONE
10 PLEASE LOAD CUT SHEET NOW	ALIMENTAZIONE FOGLIO MANUALE
**10 PLEASE LOAD CUT SHEET NOW*	ALIMENTAZIONE FOGLIO MANUALE

13 BIN 1 EMPTY	CARICATORE 1 VUOTO
13 BIN 2 EMPTY	CARICATORE 2 VUOTO
13 BOTH BINS EMPTY	ENTRAMBI I CARICATORI VUOTI
14 INVALID FORM SELECTION	SELEZIONE TIPO MODULO INVALIDO
15 LINE CHECK	ERRORE DI LINEA
17 PARITY ERROR	ERRORE DI PARITA'
22 ADDRESS NOT RECEIVED	INDIRIZZO NON RICEVUTO
27 BUFFER PRINT MODE ACTIVE	STAMPA MEMORIA ATTIVA
51 AGA NOT OPERATING	AUTOREG. DELLA TESTINA NON OPER.
51 ADJUST GAP MANUALLY	REG. DELLA TESTINA MANUALE
52 PRINTER SET-UP FAILURE	PARAMETRI DI IMPOSTAZIONE ERRATI
67 INVALID GRAPHIC CHARACTER	CARATTERE GRAFICO INVALIDO
68 CLEAR COMMAND RECEIVED	RICEVUTO COMANDO DI CANCELLAZ.
69 DATA POSSIBLY LOST	POSSIBILE PERDITA DATI
89 RIBBON JAM	INCEPPAMENTO NASTRO INCHIOSTRATO
Axx APPLICATION CHECK	ERRORE APPLICAZIONE
A89 INVALID CODE POINT "00" FOR LAC	CODICE "00" INVALIDO PER LAC
A8C INVALID MPL (113.77 INCHES)	LUNGH. PAGINA INVALIDA (>113.77)
A97 GRAPHIC CHECK	ERRORE CARATTEREE GRAFICO
and	e
COVER OPEN	COPERCHIO APERTO
COVER OPEN. PLEASE CLOSE IT!	CHIUDERE IL COPERCHIO!
CUSTOM SET # X LOADED	PERSONALIZZAZIONE # X CARICATA
CUSTOM SET # X SAVED	PERSONALIZZAZIONE # X MEMORIZZATA
DEV INFO SAVED	INFORMAZIONI DELL'UNITA' MEMOR.
ERROR TRIMMING BOTTOM JAM SENSOR	ERRORE DI TARATURA SENS.INFER.
ERROR TRIMMING REAR JAM SENSOR	ERRORE DI TARATURA SENS. POSTER.
FEED AND/OR PATH CHANGED	CAMBIAMENTO ALIMENTAZIONE CARTA

LOADING NOT ALLOWED NOW!	CARICAMENTO NON POSSIBILE!
NEW POR SAVED	NUOVO VALORE SALVATO PER P.O.R.
PLEASE REMOVE CUT SHEET	RIMUOVERE FOGLIO SINGOLO
RECEIVING DATA	DATI IN RICEZIONE
PLEASE REMOVE PAPER FROM BOTTOM PATH	RIMUOVERE LA CARTA DAL CAMMINO INFER.
PLEASE REMOVE PAPER FROM REAR PATH	RIMUOVERE LA CARTA DAL CAMMINO POSTER.

Messaggi sulla gestione della carta

PAPER-KNOB	SPOST-CARTA
UP	ALTO
DOWN	BASSO
EXIT	FINE
QUIET	ATTEN
CANCEL	CANCEL
PAPER EMPTY	MANCANZA CARTA
CURRENT PATH:	PERCORSO ATT:
START	AVVIO
P.ALGN	ALLIN.
FEED	ALIM.
F1	F1
F2	F2
F3	F3
F4	F4
REAR	POSTER
BOTTOM	INFER.
MSF	F.SING
ASF1	AFS1
ASF2	AFS2
ASF3	AFS3
MANUAL	MANUAL
DF-BIN	DF-BIN
LABELS	ETICH.
QCKRDY	PRTAUT

PATH	PERCOR
SELECT	SELEZ.
TOF SET	ALLIN. MODULO
PRINT/ADJUST	STAMPA/REGOL.
FANFLD PARK	M.CONT PARK
PAPER CHANGE	CARTA CAMBIO
FORM-	MODUL-
LOAD	CARICA
EJECT	ESPULS
LINE-	LINEA-
TEAR-	TEAR-
TEAR	TEAR
*TEAR**	TEAR*
PLEASE CONFIRM	CONFERMARE

Messaggi di allineamento

TEAR	TEAR
REAR	POSTER
BOTTOM	INFER
BIDIR1	BIDIR1
BIDIR2	BIDIR2
BIDIR3	BIDIR3
VALUE	VALORE
VERIFY	VERIF.
SENSOR	SENSOR

Messaggi di regolazione della posizione di stampa

H....H PRINT	H....H STAMP
UP	ALTO
DOWN	BASSO
LEFT	SINIST
RIGHT	DESTRA
V/LM	V/MG
V ADJ	REG V
LM ADJ	REG O

GAP ADJUST	GAP REGOL.
EXIT	FINE

Messaggi di regolazione GAP

H....H PRINT	H....H STAMP
MANUAL	MANUAL
FIXED	FISSO
AUTO	AUTO
UP	PIU'
DOWN	MENO
SELECT	SELEZ.
SAVE	SALVA
EXIT	FINE

Messaggi di Configurazione & Test

CONFIG & TEST	CONFIG & TEST
EXIT	FINE
CANCEL	CANCEL
I/F MENU	I/F MENU
TEST MENU	TEST MENU
HELP MENU	GUIDA MENU
CONFIG MENU	CONFIG MENU

Messaggi della modalitá Test

TEST MODE	MODALITA' TEST
PRINT SET-UP VALUES	PARAMETRI ATTIVAZ.
SELF TEST	AUTO TEST
TEST & DIAGNOSTICS	TEST & DIAGNOSTICI
I/F BUFFER HEX DUMP	DUMP HEX MEMORIA I/F
INTERNAL DATA MONIT.	MONITOR DATI INTERNI
TEST SCROLL	TEST SCROLL
START	AVVIO
TEST RUNNING !!!!	TEST IN ESECUZIONE !!!!

Messaggi della modalitá Guida

EXIT	FINE
CONFIG SHOW	CONFIG VISUAL
CONFIG PRINT	CONFIG STAMPA
OPERAT PRINT	OPERAT STAMPA
MAINTN PRINT	MANUT. STAMPA
BUFFER PRINT	MEMOR. STAMPA
PRINTING !!!!	IN STAMPA !!!!
SET-UP VALUES	PARAMETRI ATTIVAZ.
OPERATOR HELP	GUIDA OPERATORE
MAINTENANCE HELP	GUIDA MANUTENZIONE
MICRO-CODE VERSIONS	MICRO-CODE VERSIONS

Messaggi generici

EXIT	FINE
MORE	SEGUE
YES	SI
NO	NO

Messaggi di personalizzazione

SETUP EXIT	ATTIV FINE
UP	SU'
DOWN	GIU'
DFLT MFG	DFLT MFG
I/F SELECT	I/F SELECT
TWINAX	TWINAX
ASCII	ASCII
AUTOSWITCH	AUTOSWITCH
FF AT EOJ	FF AT EOJ
EOJ T.OUT	EOJ T.OUT
SEC.	SEC.
BUFFER	BUFFER
DATA BITS	DATA BITS

SELECTIN	SELECTIN
ON	ON
HOST	HOST
ACK MODE	ACK MODE
INSIDE	INSIDE
DURING	DURING
OUTSIDE	OUTSIDE
FEED	ALIMENTAZ.
F1(CFD)	F1(CFD)
F2(DOD)	F2(DOD)
F3(DID)	F3(DID)
F4(ASF)	F4(AFS)
BEEP	SUONO
OFF	OFF
ON	ON
ASF SELEC	SELEZ.AFS
DEFLT BIN	DEFLT BIN
VIA HOST	VIA HOST
DEFLT BIN	DEFLT BIN
MANUAL	MANUAL
BIN1	BIN 1
BIN2	BIN 2
BIN LINK	CONCAT. BIN
ADDRESS	INDIRIZZO
B.C PRINT	STAMPA B.C.
GRA PRINT	STAMPA GRA
TXT PRINT	STAMPA TXT
BIDIR	BIDIR
UNIDIR	UNIDIR
QUALITY	QUALITA'
FAST & DP	RAPIDE TEXT
TEXT	TEXTE
NLQ	NLQ
CPI	CPI
MPP	MPP
LPI	LPI
MPL	MPL

LFT MARGN	MARGINE SIN
TOP MARGN	MARGINE SUP
PAGE	PAGINA
FULL	PIENA
PARTIAL	PARZIALE
PANEL LANG	LING PANNEL
USA-UK	USA-UK
DEUTCH	DEUTCH.
FRANCE	FRANCE
ITALIA	ITALIA
ESPANA	ESPANA
CODE PAGE	LINGUAGGIO
00 MULTI	00 MULTI
01 US	01 US
02 GERMAN	02 GERMAN
03 BELGIAN	03 BELGIAN
04 BRAZIL	04 BRAZIL
05 CANADA	05 CANADA
06 DAN/NOR	06 DAN/NOR
07 FIN/SWE	07 FIN/SUE
08 FRENCH	08 FRENCH
09 ITALIAN	09 ITALIAN
10 JAPAN	10 JAPAN
11 KATAKAN	11 KATAKAN
12 PORTUG	12 PORTUG
13 SPANISH	13 SPANISH
14 SPN SPK	14 SPN SPK
15 UK	15 UK
89 KOREAN	89 KOREAN
90 ICELAND	90 ICELAND
91 LATIN 2	91 LATIN 2
92 YUGOSLV	92 YUGOSLVY
93 TURKISH	93 TURKISH
94 OLD GRE	94 OLD GRE
95 CYRILIC	95 CYRILIC
96 HEBREW	96 HEBREW
97 ARABIC	97 ARABIC

98 THAI	98 THAI
99 NEW GRE	99 NEW GRE
4224 MODE	EMULAZ 4224
PERFORMAN	ESECUZIONE
000 BC GR	000 BC GR
001 BC gr	001 BC gr
002 bc GR	002 bc GR
003 bc gr	003 bc gr
004 HOST	004 HOST
TRANSPRNT	TRASPARENTE
DISABLE	DISABILIT
ENABLE	ABILITATO
TRANS SEQ	SEQ TRASP.
1.ST	1.ST
2.ND	2.ND
LABELS	ETICHETTA
DOD-EJECT	DOD-EJECT
IMMEDIATE	IMMEDIATO
DEL'D EOF	A FINE PAG.
DID-EJECT	DID-EJECT
TOF=TM	TOF=TM
AUTO TOF	AUTO TOF
ASF TYPE	TIPO AFS
SNGL BIN	SNGL BIN
DUAL BIN	DUAL BIN
ASF3REDIR	VAR AFS3
ASF3MANU	AFS3>MANU
ASF3BIN1	AFS3>BIN1
ASF3BIN2	AFS3>BIN2
QUICK RDY	PRONTO AUT.
ONLINE FF	ONLINE FF
RIBBON	NASTRO
BLACK	NERO
8 COLOR	8 COLORI
4 COLOR	4 COLORI
QUIT!	FINE!
RESTOR	RESTOR

SAVE!	SALVA!
BACK	RITORN
CHANGES WERE MADE!	CAMBIAMENTI FATTI!
EMULATION	EMULATION
PROPRINTER	PROPRINTER
EPSON	EPSON
CHAR. SET	CHAR. SET
CS2	CS2
CS1	CS1
SLANT	SLANT
NATION	NATION
LATIN-1	LATIN-1
LATIN-2	LATIN-2
USA	USA
FRANCE	FRANCE
GERMANY	GERMANY
UK	UK
DENMARK-1	DENMARK-1
SWEDEN	SWEDEN
ITALY	ITALY
SPAIN-1	SPAIN-1
JAPAN	JAPAN
NORWAY	NORWAY
DENMARK-2	DENMARK-2
SPAIN-2	SPAIN-2
LATIN AMER.	LATIN AMER.
LATIN-1	LATIN-1
LATIN-2	LATIN-2
NLQ FONT	NLQ FONT
SKIPOVER	SKIPOVER
LF ON CR	LF ON CR
HOST	HOST
CR ON LF	CR ON LF
ZERO SLASH	ZERO SLASH
HOST COMPR.	HOST COMPR.

German Messages

Fehlermeldungen

INTERNAL I/F ERROR	INTERNAL I/F ERROR
SUPERVISOR ERROR	SUPERVISOR ERROR
RASTER ERROR	RASTER ERROR
PRINT ADAPTER ERROR	PRINT ADAPTER ERROR
INTERPRETER ERROR	INTERPRETER ERROR
ENGINE ERROR	ENGINE ERROR
LINK ERROR	LINK ERROR

BAT Meldungen

RUNNING INTERNAL BAT TESTS	INTERNE BAT TESTS AUSFUEHREN
ACTIVE PRINTER ADDRESS	AKTIVE DRUCKER ADRESSE
CUSTOM SET LOADED AT POR	EINSTELLUNG BEI POR GELADEN

Hinweismeldungen

01 PAPER OUT	PAPIER ENDE
02 PAPER JAM	PAPIERSTAU
02 PAPER JAM ON REAR PATH	PAPIERSTAU HINTERE ZUFUEHRUNG
02 PAPER JAM ON BOTTOM PATH	PAPIERSTAU UNTERE ZUFUEHRUNG
03 DOC ON DEMAND EJECTED	DOD-PAPIERSPARFUNKTION AKTIV
06 HOST REQUEST ATTENTION	MELDUNF VOM HOST
10 PLEASE LOAD CUT SHEET NOW	PAPIER MANUELL EINLEGEN
**10 PLEASE LOAD CUT SHEET NOW*	PAPIER MANUELL EINLEGEN
13 BIN 1 EMPTY	FACH 1 LEER
13 BIN 2 EMPTY	FACH 2 LEER
13 BOTH BINS EMPTY	BEIDE FACHER LEER

14 INVALID FORM SELECTION	FALSCHE FORMULARAUSWAHL
15 LINE CHECK	LEITUNGSPRUEFUNG
17 PARITY ERROR	PARITAETS-FEHLER
22 ADDRESS NOT RECEIVED	KEINE ADRESSE
27 BUFFER PRINT MODE ACTIVE	BUFFER AUSDRUCK AKTIV
51 AGA NOT OPERATING	D-KOPF AUTOMATIK ARBEITET NICHT
51 ADJUST GAP MANUALLY	D-KOPF MANUELL EINSTELLEN
52 PRINTER SET-UP FAILURE	DRUCKER SET-UP FEHLER
67 INVALID GRAPHIC CHARACTER	UNGUELTIGES GRAFIKZEICHEN
68 CLEAR COMMAND RECEIVED	LOESCH-BEFEHL EMPFANGEN
69 DATA POSSIBLY LOST	DATEN GEHEN EVTL: VERLOREN
89 RIBBON JAM	FARBBAND BLCKIERT
Axx APPLICATION CHECK	NWENDUNGS-PRUEFUNG
A89 INVALID CODE POINT "00" FOR LAC	FALSCHER CODE "00" FUER LAC
A8C INVALID MPL (113.77 INCHES)	MPL ZU GROSS (>113.77 ZOLL)
A97 GRAPHIC CHECK	GRAFIK - PRUEFUNG
and	und
COVER OPEN	ABDECKUNG OFFEN
COVER OPEN. PLEASE CLOSE IT!	DIE ABDECKUNG OFFEN!
CUSTOM SET # X LOADED	EINSTELLUNG # X GELADEN
CUSTOM SET # X SAVED	EINSTELLUNG # X GESPEICHERT
DEV INFO SAVED	EINHEITENINFORMATION GESPEICHERT
ERROR TRIMMING BOTTOM JAM SENSOR	FEHLER TRIMMUNG UNTERER SENSOR
ERROR TRIMMING REAR JAM SENSOR	FEHLER TRIMMUNG INTERER SENSOR
FEED AND/OR PATH CHANGED	ZUFUHR UND/ODER WEG GEAENDERT
LOADING NOT ALLOWED NOW!	LADEN VON PAPIER NICHT MOEGLICH!

NEW POR SAVED	NEUE POR GESPEICHERT
PLEASE REMOVE CUT SHEET	BITTE EINZELBLATT ENTFERNEN.
RECEIVING DATA	DATEN WERDEN EMPFANGEN
PLEASE REMOVE PAPER FROM BOTTOM PATH	PAPIER ENTFERNEN AUS UNTEREM WEG
PLEASE REMOVE PAPER FROM REAR PATH	PAPIER ENTFERNEN AUS HINTEREM WEG

Papierhandhabungsmeldungen

PAPER-KNOB	PAPIER
UP	AUF
DOWN	AB
EXIT	ENDE
QUIET	LEISE
CANCEL	ABBR.
PAPER EMPTY	PAPIER NICHT VORHANDEN
CURRENT PATH:	PAPIERWEG:
START	START
P.ALGN	AUSR.
FEED	ZUFHUR
F1	F1
F2	F2
F3	F3
F4	F4
REAR	HINTEN
BOTTOM	UNTEN
MSF	MSF
ASF1	ASF1
ASF2	ASF2
ASF3	ASF3
MANUAL	MANUAL
DF-BIN	DF-BIN
LABELS	EITIKET
QCKRDY	QCKRDY
PATH SELECT	P-WEG WAHL
TOF SET	TOF SET

PRINT/ADJUST	DRUCK AUSR.
FANFLD PARK	ENDLOS PARKEN
PAPER CHANGE	PAPIER AENDER
FORM-	FORM-
LOAD	LADEN
EJECT	EJECT
LINE-	ZEILE-
TEAR-	REISS-
TEAR	REISS
*TEAR**	REISS*
PLEASE CONFIRM	BITTE BESTAETIGEN

Ausrichtungsmeldungen

TEAR	REISS
REAR	HINTEN
BOTTOM	UNTEN
BIDIR1	BIDIR1
BIDIR2	BIDIR2
BIDIR3	BIDIR3
VALUE	WERT
VERIFY	PRUEFE
SENSOR	SENSOR

Druckpositionausrichtungsmeldungen

H....H PRINT	H....H DRUCK
UP	AUF
DOWN	AB
LEFT	LINKS
RIGHT	RECHTS
V/LM	V/LR
V ADJ	V ADJ
LM ADJ	LR ADJ
GAP ADJUST	D-KOPF ABSTAN
EXIT	ENDE

GAP-Ausrichtungsmeldungen

H....H PRINT	H....H DRUCK
MANUAL	MANUELL JUST.
FIXED	FEST JUST.
AUTO	AUTO JUST.
UP	AUF
DOWN	AB
SELECT	WERT
SAVE	SICHER
EXIT	ENDE

Konfigurierung & Test Meldungen

CONFIG & TEST	KONFIG & TEST
EXIT	ENDE
CANCEL	ABBR.
I/F MENU	I/F MENUE
TEST MENU	TEST MENUE
HELP MENU	HILFE MENUE
CONFIG MENU	KONFIG MENUE

Testmeldungen

TEST MODE	TEST MODUS
PRINT SET-UP VALUES	DRUCK KONFIGURATION
SELF TEST	SELBSTTEST
TEST & DIAGNOSTICS	TEST & DIAGNOSE
I/F BUFFER HEX DUMP	I/F BUFFER HEX DUMP
INTERNAL DATA MONIT.	INTERNER DATA MONIT.
TEST SCROLL	TEST WAHL
START	START
TEST RUNNING !!!!	TEST WIRD DURCHGEFUEHRT !!!!
STOP	STOP

Hilfemeldungen

EXIT	ENDE
CONFIG SHOW	KONFIG ANZEIG
CONFIG PRINT	KONFIG DRUCK
OPERAT PRINT	BEDIEN DRUCK1
MAINTN PRINT	WARTNG DRUCK2
BUFFER PRINT	BUFFER DRUCK
PRINTING !!!!	WIRD GEDRUCKT !!!!
SET-UP VALUES	KONFIGURATION
OPERATOR HELP	BEDIENDER-HILFE
MAINTENANCE HELP	WARTUNGS-HILFE
MICRO-CODE VERSIONS	MICRO-CODE VERSIONS

Allgemeine Meldungen

EXIT	ENDE
MORE	MEHR
YES	YES
NO	NO

Konfigurierungsmeldungen

SETUP EXIT	SETUP ENDE
UP	UF
DOWN	AB
DFLT MFG	STD MFG
I/F SELECT	I/F SELECT
TWINAX	TWINAX
ASCII	ASCII
AUTOSWITCH	AUTOSWITCH
FF AT EOJ	FF AT EOJ
EOJ T.OUT	EOJ T.OUT
SEC.	SEC.
BUFFER	BUFFER
DATA BITS	DATA BITS

SELECTIN	SELECTIN
ON	ON
HOST	HOST
ACK MODE	ACK MODE
INSIDE	INSIDE
DURING	DURING
OUTSIDE	EXTERNE
FEED	ZUFUEHRUNG
F1(CFD)	F1(CFD)
F2(DOD)	F2(DOD)
F3(DID)	F3(DID)
F4(ASF)	F4(AFS)
BEEP	ALARM
OFF	AUS
ON	EIN
ASF SELEC	MAGAZINWAHL
DEFLT BIN	STD.MAGAZIN
VIA HOST	HOST
DEFLT BIN	STD.MAGAZIN
MANUAL	MAGAZIN 0
BIN1	MAGAZIN 1
BIN2	MAGAZIN 2
BIN LINK	VER.MAGAZINE
NO	NEIN
YES	JA
ADDRESS	ADRESSE
B.C PRINT	BARC.-DRUCK
GRA PRINT	GRAFIK-DRUCK
TXT PRINT	TEXT-DRUCK
BIDIR	BIDIR
UNIDIR	UNIDIR
QUALITY	QUALITAET
FAST & DP	SCHNELL/DP
TEXT	TEXT
NLQ	BRIEF
CPI	CPI
MPP	MPP

LPI	LPI
MPL	FORMLAEGE
LFT MARGN	RAND LINKS
TOP MARGN	OBERER RAND
PAGE	SEITE
FULL	VOLL
PARTIAL	TELWEISE
PANEL LANG	SPRACHE
USA-UK	USA-UK
DEUTCH	DEUTSC
FRANCE	FRANCE
ITALIA	ITALIA
ESPANA	ESPANA
CODE PAGE	ZEICHENSATZ
00 MULTI	00 MULTI
01 US	01 US
02 GERMAN	02 DEUTSCH
03 BELGIAN	03 BELGIAN
04 BRAZIL	04 BRAZIL
05 CANADA	05 CANADA
06 DAN/NOR	06 DAN/NOR
07 FIN/SWE	07 FIN/SUE
08 FRENCH	08 FRENCH
09 ITALIAN	09 ITALIAN
10 JAPAN	10 JAPAN
11 KATAKAN	11 KATAKAN
12 PORTUG	12 PORTUG
13 SPANISH	13 SPANISH
14 SPN SPK	14 SPN SPK
15 UK	15 UK
89 KOREAN	89 KOREAN
90 ICELAND	90 ICELAND
91 LATIN 2	91 LATIN 2
92 YUGOSLV	92 YUGOSLV
93 TURKISH	93 TURKISH
94 OLD GRE	94 OLD GRE
95 CYRILIC	95 CYRILIC

96 HEBREW	96 HEBREW
97 ARABIC	97 ARABIC
98 THAI	98 THAI
99 NEW GRE	99 NEW GRE
4224 MODE	4224 EMU
PERFORMAN	AUFLOESUNG
000 BC GR	000 BC GR
001 BC gr	001 BC gr
002 bc GR	002 bc GR
003 bc gr	003 bc gr
004 HOST	004 HOST
TRANSPRNT	TRANSPRNT
DISABLE	AUS
ENABLE	EIN
TRANS SEQ	TRANS SEQ
1.ST	1.ZEICHEN
2.ND	2.ZEICHEN
LABELS	EITIKETTEN
NO	NEIN
YES	JA
DOD-EJECT	DOD-AUSWURF
IMMEDIATE	SOFORT
DEL'D EOF	VERZOEGERT
DID-EJECT	DID-AUSWURF
TOF=TM	TOF=TM
AUTO TOF	AUTO TOF
ASF TYPE	MAGAZIN-ART
SNGL BIN	1 MAGAZIN
DUAL BIN	2 MAGAZIN
ASF3REDIR	MAGAZIN 3
ASF3MANU	3MANUELL
ASF3BIN1	3MAGAZ.1
ASF3BIN2	A3MAGAZ.2
QUICK RDY	AUTO-BEREIT
NO	NEIN
YES	JA
ONLINE FF	ONLINE FF

RIBBON	FARBBAND
BLACK	SCHWARZ
8 COLOR	8 FARBEN
4 COLOR	4 FARBEN
QUIT!	ABBR.
RESTOR	WERK
SAVE!	SICHER
BACK	ZURUECK
CHANGES WERE MADE!	AENDERUNGEN ERKANNT!
EMULATION	EMULATION
PROPRINTER	PROPRINTER
EPSON	EPSON
CHAR. SET	CHAR. SET
CS2	CS2
CS1	CS1
SLANT	SLANT
NATION	NATION
LATIN-1	LATIN-1
LATIN-2	LATIN-2
USA	USA
FRANCE	FRANCE
GERMANY	GERMANY
UK	UK
DENMARK-1	DENMARK-1
SWEDEN	SWEDEN
ITALY	ITALY
SPAIN-1	SPAIN-1
JAPAN	JAPAN
NORWAY	NORWAY
DENMARK-2	DENMARK-2
SPAIN-2	SPAIN-2
LATIN AMER.	LATIN AMER.
LATIN-1	LATIN-1
LATIN-2	LATIN-2
NLQ FONT	NLQ FONT
SKIPOVER	SKIPOVER
LF ON CR	LF ON CR

HOST	HOST
CR ON LF	CR ON LF
ZERO SLASH	ZERO SLASH
HOST COMPR.	HOST COMPR.

Spanish Messages

Mensajes de error

INTERNAL I/F ERROR	ERROR EN I/F INTERNO
SUPERVISOR ERROR	ERROR EN SUPERVISOR
RASTER ERROR	ERROR EN RASTER
PRINT ADAPTER ERROR	ERROR EN ADAPTATOR DE IMPRESSION
INTERPRETER ERROR	ERROR DE INTERPRETE
ENGINE ERROR	ERROR MECANICO
LINK ERROR	ERROR EN LINK

Mensajes de los BAT (Basic Assurance Tests)

RUNNING INTERNAL BAT TESTS	EJECUTANDO TESTS BASICOS INTERNOS
ACTIVE PRINTER ADDRESS	DIRECCION ACTIVA DE IMPRESORA
CUSTOM SET LOADED AT POR	CONFIGURACION CARGADA AL ENCENDER

Mensajes de advertencia

01 PAPER OUT	FALTA PAPEL
02 PAPER JAM	ATASCO DE PAPEL
02 PAPER JAM ON REAR PATH	ATASCO DE PAPEL EN ALIMENT. POSTE.
02 PAPER JAM ON BOTTOM PATH	ATASCO DE PAPEL EN ALIMENT. INFER.
03 DOC ON DEMAND EJECTED	DOC. BAJO DEMANDA (DBD) EXPULSADO
06 HOST REQUEST ATTENTION	HOST REQUIERE ATENCION

10 PLEASE LOAD CUT SHEET NOW	ALIMENTAC. MANUAL DE HOJAS (AMH)
**10 PLEASE LOAD CUT SHEET NOW*	ALIMENTAC. MANUAL DE HOJAS (AMH)
13 BIN 1 EMPTY	BANDEJA 1 VACIA
13 BIN 2 EMPTY	BANDEJA 2 VACIA
13 BOTH BINS EMPTY	AMBAS BANDEJAS VACIAS
14 INVALID FORM SELECTION	SELECCION INVALIDA DE FORMULARIO
15 LINE CHECK	ERROR DE LINEA
17 PARITY ERROR	DETEC. ERROR DE PARIDAD EN LINEA
22 ADDRESS NOT RECEIVED	DIRECCION NO ACTIVA POR EL HOST
27 BUFFER PRINT MODE ACTIVE	MODO IMPR. BUFFER ACTIVO
51 AGA NOT OPERATING	NO FUNCIONA AJ.AUT.SEP.CABEZA
51 ADJUST GAP MANUALLY	AJUSTAR SEP.CABEZA MANUALMENTE
52 PRINTER SET-UP FAILURE	FALLO EN SET-UP DE IMPRESORA
67 INVALID GRAPHIC CHARACTER	CARACTER GRAFICO INVALIDO
68 CLEAR COMMAND RECEIVED	RECIBIDO COMANDO DE CLEAR
69 DATA POSSIBLY LOST	POSIBLE PERDIDA DE DATOS
89 RIBBON JAM	ATASCO DE CINTA
Axx APPLICATION CHECK	ERROR DE APLICACION
A89 INVALID CODE POINT "00" FOR LAC	"00" CODIGO INVALIDO PARA LAC
A8C INVALID MPL (113.77 INCHES)	MLI INVALIDO (>113.77 PULGADAS)
A97 GRAPHIC CHECK	ERROR GRAFICO
and	y
COVER OPEN	TAPA ABIERTA
COVER OPEN. PLEASE CLOSE IT!	TAPA ABIERTA. POR FAVOR CIERRELA!
CUSTOM SET # X LOADED	CONFIGURACION # X CARGADA
CUSTOM SET # X SAVED	CONFIGURACION # X SALVADA
DEV INFO SAVED	SALVADA INFORM. DEL DISPOSITIVO
ERROR TRIMMING BOTTOM JAM SENSOR	ERROR EN DETEC.SENSOR INFER.

ERROR TRIMMING REAR JAM SENSOR	ERROR EN DETEC.SENSOR POSTE.
FEED AND/OR PATH CHANGED	CAMBIADO TIPO Y/O CAMINO PAPEL
LOADING NOT ALLOWED NOW!	NO SE PUEDE CARGAR AHORA!
NEW POR SAVED	SALVADA NUEVA CONF. EN ENCENDIDO
PLEASE REMOVE CUT SHEET	POR FAVOR QUITAR HOJA
RECEIVING DATA	RECIBIENDO DATOS
PLEASE REMOVE PAPER FROM BOTTOM PATH	QUITAR PAPEL DE ALIMENT.INFER.
PLEASE REMOVE PAPER FROM REAR PATH	QUITAR PAPEL DE ALIMENT.POSTE.

Mensajes del tratamiento del papel

PAPER-KNOB	AJUSTE PAPEL
UP	SUBIR
DOWN	BAJAR
EXIT	SALIR
QUIET	SILEN
CANCEL	CANCEL
PAPER EMPTY	FALTA PAPEL
CURRENT PATH:	ALIM. ACTUAL:
START	ARRA.
P.ALGN	ALN.PA
FEED	T.ALIM.
F1	F1
F2	F2
F3	F3
F4	F4
REAR	POSTE.
BOTTOM	INFER.
MSF	AMH
ASF1	AAH1
ASF2	AAH2
ASF3	AAH3
MANUAL	MANUAL

DF-BIN	BAN.DF
LABELS	ETIQ.
QCKRDY	LST.IM
PATH	CAMINO
SELECT	SELEC.
TOF SET	TOF FIJAR
PRINT/ADJUST	IMPRE./AJUSTE
FANFLD PARE	APARC. PA.CON
PAPER CHANGE	CAMBIO PAPEL
FORM-	FORM-
LOAD	CARGAR
EJECT	EXPUL.
LINE-	LINEA-
TEAR-	CORTE-
TEAR	CORTE
*TEAR**	CORTE*
PLEASE CONFIRM	POR FAVOR CONFIRMAR

Mensajes de alineación

TEAR	CORTE
REAR	POSTE.
BOTTOM	INFER.
BIDIR1	BIDIR1
BIDIR2	BIDIR2
BIDIR3	BIDIR3
VALUE	VALOR
VERIFY	VERIF.
SENSOR	SENSOR

Mensajes de regulación de la posición de impresión

H....H PRINT	H....H IMPR.
UP	SUBIR
DOWN	BAJAR
LEFT	IZQDA.
RIGHT	DRCHA.

V/LM	V/MI
V ADJ	AJ. V
LM ADJ	AJ. MI
GAP ADJUST	S.CABE AJUST.
EXIT	SALIR

Mensajes de regulación GAP

H....H PRINT	H....H IMPR.
MANUAL	MANUAL
FIXED	FIJO
AUTO	AUTO
UP	SUBIR
DOWN	BAJAR
SELECT	SELEC.
SAVE	SALVAR
EXIT	SALIR

Mensajes de Configuración y Autoverificación

CONFIG & TEST	CONFIG & TEST
EXIT	SALIR
CANCEL	CANCEL
I/F MENU	I/F MENU
TEST MENU	TEST MENU
HELP MENU	AYUDA MENU
CONFIG MENU	CONFIG MENU

Mensajes de la modalidad de Autoverificación

TEST MODE	MODO TEST
PRINT SET-UP VALUES	IMPR. VALORES SET-UP
SELF TEST	AUTO TEST
TEST & DIAGNOSTICS	TEST & DIAGNOSTICOS
I/F BUFFER HEX DUMP	VOLC.HEX.BUFFER I/F
INTERNAL DATA MONIT.	MONIT.DATOS INTER.
TEST SCROLL	TEST AVANZ.

START	ARRA.
TEST RUNNING !!!!	TEST EJECUTANDO !!!!

Mensajes de la modalidad Guia

EXIT	SALIR
CONFIG SHOW	CONFIG MOSTR.
CONFIG PRINT	CONFIG IMPRI.
OPERAT PRINT	OPERAD IMPRI.
MAINTN PRINT	MANTEN IMPRI.
BUFFER IMP.	IMPRI. BUFFER
PRINTING !!!!	IMPRIMIENDO !!!!
SET-UP VALUES	VALORES SET-UP
OPERATOR HELP	AYUDA DEL OPERADOR
MAINTENANCE HELP	AYUDA DE MANTENIM.
MICRO-CODE VERSIONS	MICRO-CODE VERSIONS

Mensajes genéricos

EXIT	SALIR
MORE	MAS..
YES	SI
NO	NO

Mensajes de configuración

SETUP EXIT	SETUP SALIR
UP	SUBIR
DOWN	BAJAR
DFLT MFG	DFLT MFG
I/F SELECT	I/F SELECT
TWINAX	TWINAX
ASCII	ASCII
AUTOSWITCH	AUTOSWITCH
FF AT EOJ	FF AT EOJ
EOJ T.OUT	EOJ T.OUT
SEC.	SEC.

BUFFER	BUFFER
DATA BITS	DATA BITS
SELECTIN	SELECTIN
ON	ON
HOST	HOST
ACK MODE	ACK MODE
INSIDE	INSIDE
DURING	DURING
OUTSIDE	OUTSIDE
FEED	TIPO ALIM.
F1(CFD)	F1(PPC)
F2(DOD)	F2(DBD)
F3(DID)	F3(DID)
F4(ASF)	F4(AAH)
BEEP	ALARMA
OFF	NO
ON	SI
ASF SELEC	SELEC. AAH
DEFLT BIN	BAN.DEFEC.
VIA HOST	POR HOST
DEFLT BIN	BAND.DEFEC.
MANUAL	MANUAL
BIN1	BAN 1
BIN2	BAN 2
BIN LINK	COENCAD.BAND.
NO	NO
YES	SI
ADDRESS	DIRECCION
B.C PRINT	IMPR. C.B.
GRA PRINT	IMPR. GRAF.
TXT PRINT	IMPR. TEXTO
BIDIR	BIDIR
UNIDIR	UNIDIR
QUALITY	CALIDAD
DRAFT	BORRADOR
TEXT	TEXTO
NLQ	CARTA

CPI	CPP
MPP	MPI
LPI	LPP
MPL	MLI
LFT MARGN	MRG. IZQDO
TOP MARGN	MARG.SUPER.
PAGE	PAGINA
FULL	COMPLETA
PARTIAL	PARCIAL
PANEL LANG	LENG. PANEL
USA-UK	USA-UK
DEUTCH	DEUTCH
FRANCE	FRANCE
ITALIA	ITALIA
ESPANA	ESPANA
CODE PAGE	COD. PAGINA
LANGUAGE	LENGUAJE
00 MULTI	00 MULTI
01 US	01 US
02 GERMAN	02 GERMAN
03 BELGIAN	03 BELGIAN
04 BRAZIL	04 BRAZIL
05 CANADA	05 CANADA
06 DAN/NOR	06 DAN/NOR
07 FIN/SWE	07 FIN/SUE
08 FRENCH	08 FRENCH
09 ITALIAN	09 ITALIAN
10 JAPAN	10 JAPAN
11 KATAKAN	11 KATAKAN
12 PORTUG	12 PORTUG
13 SPANISH	13 CASTEL.
14 SPN SPK	14 ESP HAB
15 UK	15 UK
89 KOREAN	89 KOREAN
90 ICELAND	90 ICELAND
91 LATIN 2	91 LATIN 2
92 YUGOSLV	92 YUGOSLV

93 TURKISH	93 TURKISH
94 OLD GRE	94 OLD GRE
95 CYRILIC	95 CYRILIC
96 HEBREW	96 HEBREW
97 ARABIC	97 ARABIC
98 THAI	98 THAI
99 NEW GRE	99 NEW GRE
4224 MODE	MODO 4224
PERFORMAN	CAL.CB.GRF.
000 BC GR	000 CB GRF
001 BC gr	001 CB grf
002 bc GR	002 cb GRF
003 bc gr	003 cb grf
004 HOST	004 HOST
TRANSPRNT	IMP.TRANSP.
DISABLE	DESHABILIT.
ENABLE	HABILITADO
TRANS SEQ	SEC.TRANSP.
1.ST	PRI.
2.ND	SEG.
LABELS	ETIQUETAS
NO	NO
YES	SI
DOD-EJECT	EXPULS.DBB
IMMEDIATE	IMMEDIATO
DEL'D EOF	RETARD.FF.
DID-EJECT	EXPULS.DID
TOF=TM	PF=MGEN.SUP
AUTO TOF	PF=AUTO
ASF TYPE	TIPO AAH
SNGL BIN	UNA BANDEJA
DUAL BIN	DOS BANDEJ.
ASF3REDIR	REDIR.AAH3
ASF3MANU	AAH3MANU
ASF3BIN1	AAH3BAN1
ASF3BIN2	AAH3BAN2
QUICK RDY	LISTA IMMED

ONLINE FF	FF EN LISTA
NO	NO
YES	SI
RIBBON	CINTA
BLACK	NEGRA
8 COLOR	8 COLORES
4 COLOR	4 COLORES
QUIT!	AVAN!
RESTOR	RESTAU
SAVE!	SALVAR
BACK	ATRAS
CHANGES WERE MADE!	SE HAN REALIZADO CAMBIOS!
EMULATION	EMULATION
PROPRINTER	PROPRINTER
EPSON	EPSON
CHAR. SET	CHAR. SET
CS2	CS2
CS1	CS1
SLANT	SLANT
NATION	NATION
LATIN-1	LATIN-1
LATIN-2	LATIN-2
USA	USA
FRANCE	FRANCE
GERMANY	GERMANY
UK	UK
DENMARK-1	DENMARK-1
SWEDEN	SWEDEN
ITALY	ITALY
SPAIN-1	SPAIN-1
JAPAN	JAPAN
NORWAY	NORWAY
DENMARK-2	DENMARK-2
SPAIN-2	SPAIN-2
LATIN AMER.	LATIN AMER.
LATIN-1	LATIN-1
LATIN-2	LATIN-2

NLQ FONT	NLQ FONT
SKIPOVER	SKIPOVER
LF ON CR	LF ON CR
HOST	HOST
CR ON LF	CR ON LF
ZERO SLASH	ZERO SLASH
HOST COMPR.	HOST COMPR.

Commands

This appendix provides information about the commands supported by your printer. In ASCII mode, the commands are organized by function groups. Each command has both a brief and a detailed description.

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Bar Code Commands *D.28*
Miscellaneous *D.32*

Introduction

General Overview

This section is designed for technical users that wish to program the printer's operation. It describes the control commands that can be included in the data sent to the printer. The commands described in this section are grouped according to their functions. Some commands control paper feeding while others allow the programmer to select printing attributes.

Each command has the following structure:

- Name and function description. Information about protocol (EPSON, IBM or Printer Specific mode).
- The hexadecimal and decimal codes for the command; the symbol (*#*) represents variable parameters of the command. The functions of these parameters are explained in the corresponding command description.

Command Summary

BEL	Sounds the buzzer.	D.32
BS	Moves one character to the left.	D.33
CAN	Cancels data on same line.	D.33
CR	Causes all received data to be printed out.	D.33
DC 1	Selects printer.	D.34
DC 3	Deselects printer (EPSON mode).	D.34
DC2	Resets compressed spacing.	D.10
DC4	Cancels double width printing.	D.14
DC4 DC4 ESC ! {n} 1 {p} EM	EAN-8 bar code (Printer Specific mode).	D.28
DC4 DC4 ESC ! {n} 17 {p} EM	2/5 INTERLEAVED bar code(Printer Specific mode)	D.29
DC4 DC4 ESC ! {n} 18 {p} EM	2/5 INDUSTRIAL bar code (Printer Specific mode).	D.30
DC4 DC4 ESC ! {n} 19 {p} EM	2/5 MATRIX bar code (Printer Specific mode).	D.30
DC4 DC4 ESC ! {n} 2 {p} EM	EAN-13 bar code (Printer Specific mode).	D.28
DC4 DC4 ESC ! {n} 20 {p} EM	CODE 39 bar code (Printer Specific mode).	D.30

DC4 DC4 ESC ! {n} 22 {p} EM
CODABAR bar code (Printer Specific mode). D.31

DC4 DC4 ESC ! {n} 23 {p} EM
CODE 128 bar code (Printer Specific mode). D.31

DC4 DC4 ESC ! {n} 24 {p} EM
POSTNET bar code (Printer Specific mode). D.32

DC4 DC4 ESC ! {n} 3 {p} EM
UPC-A bar code (Printer Specific mode). D.29

DC4 DC4 ESC (GS {n1} {data}GS {n2} {data} ..... EM
Prints bar code symbols (Printer Specific mode). D.32

DC4 DC4 ESC @ Re-initializes the printer (Printer Specific mode). D.37

DC4 DC4 ESC 5 Ejects paper without loading a new single sheet (Printer Specific mode). D.23

DC4 DC4 ESC 8 Loads paper from tray 1 (Printer Specific mode). D.23

DC4 DC4 ESC 9 Loads paper from tray 2 (Printer Specific mode). D.23

DC4 DC4 ESC g {n}
Selects resident fonts (Printer Specific mode). D.21

DC4 DC4 ESC H {v} {h}
Sets Macro characters (Printer Specific mode). D.40

DC4 DC4 ESC I Reset Macro character relative position (Printer Specific mode). D.40

DC4 DC4 ESC J {v} {h}
Sets Macro characters (Printer Specific mode). D.39

DC4 DC4 ESC p {n}
Selects Quality printing type (Printer Specific mode). D.35

DC4 DC4 ESC S {n}
Selects Code Pages (Printer Specific mode). D.21

DC4 DC4 ESC Y {n}
Selects emulations (Printer Specific mode). D.32

DC4 DC4 ESC A {n}
Sets horizontal spacing to 15,17 or 20 cpi. D.10

DEL Deletes last character sent (EPSON mode). D.33

ESC ! {n} Master select (EPSON mode). D.17

ESC # Cancel Most Significant Bit control (EPSON mode). D.37

ESC $ {n} {m} Sets absolute dot position (EPSON mode). D.37

ESC % {0} NUL ROM character generator(EPSON mode). D.26

ESC % {1} NUL DLL character set in RAM (EPSON mode). D.26

ESC & NUL {n} {m} {an} {pn0}...{pn10} {am} {pm0}...{pm10}
Defines down-line loaded characters (EPSON mode). D.26

ESC * {m} {n1} {n2} {p1}...{px}
Sets dot graphics mode (EPSON mode). D.24

ESC - {n} Sets or cancels underlined printing. D.16

ESC / {m} Select VFU channel (EPSON mode). D.13

ESC :	Sets 12 cpi (IBM mode).	D.9
ESC : NUL NUL NUL	Copies ROM character generator to RAM (EPSON mode)	D.25
ESC <	Prints left to right for only one line (EPSON mode).	D.36
ESC =	Set the 8th bit of the byte to 0 (EPSON mode).	D.37
ESC = {n} {m} {35} {p} {a1} ...	Defines down-line loaded character (IBM mode).	D.27
ESC >	Set the 8th bit of the byte to 1 (EPSON mode).	D.37
ESC ? {n} {m}	Reassign the graphics mode.(EPSON mode)	D.25
ESC @	Re-initializes the printer (EPSON mode).	D.36
ESC [@ {l} {h} {m1}...{m4}	Changes height/width/vertical spacing (IBM mode).	D.14
ESC \ {n} {m}	Sets relative dot position (EPSON mode).	D.38
ESC \ {n} {m}	Prints IBM PC CS (IBM mode).	D.35
ESC]	Sets a reverse line feed (IBM mode).	D.19
ESC ^ {n}	Prints one character from IBM PC CS (IBM mode).	D.36
ESC _ {n}	Sets or cancels overscore printing (IBM mode).	D.17
ESC 0	Sets vertical spacing to 1/8 inch.	D.11
ESC 1	Sets vertical spacing to 7/72 inch (IBM mode).	D.11
ESC 2	Sets vertical spacing to default value.	D.11
ESC 3 {n}	Sets vertical spacing to n/216 inch.	D.11
ESC 4	Sets italics (EPSON mode) .	D.16
ESC 4	Sets top of form (IBM mode).	D.8
ESC 5	Cancels italics (EPSON mode).	D.16
ESC 5 {n}	Sets an automatic LF after a CR (IBM mode).	D.19
ESC 6	Selects Character Set 2.	D.20
ESC 7	Selects Character Set 1.	D.20
ESC 8	Disables PE condition control (EPSON mode).	D.39
ESC 9	Enables PE condition control (EPSON mode).	D.39
ESC a {n}	Selects justification mode (EPSON mode).	D.38
ESC A {n}	Sets variable vertical spacing.	D.11
ESC b	Selects black ribbon band (IBM mode).	D.18
ESC b {m} {n1}... NUL	Sets vertical tabs in VFU channel (EPSON mode).	D.13
ESC b {m} NUL	Cancels vertical tabs in VFU channel (EPSON mode)	D.13
ESC B {n1}...{nx} NUL	Sets vertical tabs (IBM mode)	
	Sets vertical tabs in 0 VFU channel (EPSON mode).	D.12
ESC B NUL	Cancels all current vertical tab stops.	D.12
ESC c	Selects cyan ribbon band (IBM mode).	D.18
ESC C {n}	Sets form length in number of lines.	D.7

ESC C NUL {n}	Sets form length in inches.	D.7
ESC d {n} {m}	Spaces forwards relative dot position (IBM mode).	D.38
ESC D {n1}.. {nx} NUL	Sets horizontal tab stops	D.12
ESC E	Sets emphasized printing.	D.15
ESC e {n} {m}	Spaces backwards relative dot position (IBM mode).	D.38
ESC EM {n}	Ejects paper and selects or deselects the ASF (EPSON mode).	D.22
ESC EM R	Ejects paper and selects the semi-automatic loading (EPSON mode).	D.22
ESC F	Cancels emphasized printing.	D.16
ESC G	Sets double strike printing.	D.16
ESC g	Sets horizontal spacing to 15 cpi (EPSON mode).	D.9
ESC H	Cancels double strike printing.	D.16
ESC I {n}	Selects printing mode (IBM mode).	D.34
ESC J {n}	Advances paper n/216 inch.	D.19
ESC j {n}	Reverses paper n/216 inch (EPSON mode).	D.19
ESC k {n}	Selects fonts (EPSON mode).	D.21
ESC K {n1} {n2} {p1}...{px}	Prints normal density dot graphics (60 dpi).	D.23
ESC l {n}	Sets left margin (EPSON mode).	D.8
ESC L {n1} {n2} {p1}...{px}	Prints double density dot graphics at half speed.	D.24
ESC m	Selects magenta ribbon band (IBM mode).	D.18
ESC M	Sets 12 or 20 cpi (EPSON mode).	D.9
ESC N {n}	Set bottom of form (skip over perforation).	D.7
ESC O	Cancels skip-over perforation.	D.7
ESC P	Sets 10 or 17 cpi (EPSON mode).	D.9
ESC P {n}	Sets or cancels proportional printing (IBM mode).	D.10
ESC p {n}	Sets or cancels proportional printing (EPSON mode).	D.10
ESC Q {22}	Deselects printer (IBM mode).	D.34
ESC Q {n}	Sets the right margin (EPSON mode).	D.8
ESC r {n}	Select colours (EPSON mode).	D.10
ESC R	Sets horizontal and vertical tabs to default values (IBM mode).	D.14
ESC R {n}	Selects national character set (EPSON mode).	D.20
ESC s {n}	Sets and resets the Quiet printing (EPSON mode).	D.39
ESC S {n}	Sets subscript or superscript printing.	D.16
ESC SP {n}	Sets intercharacter space (EPSON mode).	D.37
ESC T	Cancels subscript or superscript printing.	D.16
ESC t {n}	Selects Character table (EPSON mode).	D.20
ESC U {n}	Sets and cancels monodirectional printing.	D.36

ESC w {n}	Sets or cancels double high printing (EPSON mode).	D.15
ESC W {n}	Sets or cancels double width printing.	D.14
ESC x {n}	Selects Quality or Draft printing (EPSON mode).	D.34
ESC X {n} {m}	Sets left and right margins (IBM mode).	D.8
ESC y	Selects yellow ribbon band (IBM mode).	D.18
ESC Y {n1} {n2} {p1}...{px}	Prints double density dot graphics at normal speed.	D.24
ESC Z {n1} {n2} {p1}...{px}	Prints quadruple density dot graphics..	D.24
FF	Advances paper to the top of next page.	D.19
HT	Moves logically to next horizontal tab.	D.12
LF	Advances paper one line.	D.18
SI or ESC SI	Selects compressed printing.	D.9
SO or ESC SO	Sets double width printing.	D.14
VT	Advances paper to the next vertical tab of VFU.	D.13

Command Description

Setting Form Length

ESC C {n}

Sets form length in number of lines.

1B 43 {n}
27 67 {n}
1 ≤ n ≤ 127

This command sets the form length to the number of lines specified by {n} at the current vertical spacing. The form length is memorized as physical position on the page. The current paper position is assumed as top of the form.

ESC C NUL {n}

Sets form length in inches.

1B 43 00 {n}
27 67 0 {n}
1 ≤ n ≤ 22

This command sets the form length to the number of inches specified by {n}. The current position of the paper is assumed as top of form.

ESC N {n}

Set bottom of form (skip over perforation).

1B 4E {n}
27 78 {n}
1≤ n ≤ 255

This sequence sets the number of lines {n} to be skipped at the bottom of a page. {n} must be less than the current form length. The bottom of form distance is memorized as physical position on the page. This can be reset by the ESC O command or by changing the form length setting.

ESC O

Cancels skip-over perforation.

1B 4F
27 79

This sequence sets the number of lines of skip perforation to {0}.

Setting Margins

ESC l {n}

Sets left margin (only EPSON mode).

1B 6C {n}
27 108 {n}
0 ≤ n ≤ 229

This code sets the left margin at the current horizontal spacing. It must be sent at the beginning of the line. {n} is the number of columns. The left margin must be smaller than the right margin.

ESC Q {n}

Sets the right margin (only EPSON mode).

1B 51 {n)
27 81 {n}
1≤ n ≤ 255

This code specifies the line length required at the current horizontal spacing. It must be sent at the beginning of the line. {n} is the number of columns and for each type of horizontal spacing there is a range of values. The right margin must be greater than the left margin.

ESC X {n} {m}

Sets left and right margins (only IBM mode).

1B 58 {n} {m}
27 88 {n} {m}
0 ≤ n ≤ 255
0 ≤ m ≤ 255

This command sets the left and right margins simultaneously. The {n} and {m} parameters indicate respectively the number of columns for the left and right margin at the current horizontal spacing. These margins are memorized in terms of absolute displacement from the physical left edge of the page. If {n} is equal to 0, the current left margin value is used. If {m} is equal to 0, the current right margin is used.

ESC 4

Sets top of form (only IBM mode).

1B 34
27 52

This sequence sets the current paper position as top of form that is first printable line.

Setting Spacings

ESC P

Sets horizontal spacing to 10 or 17 cpi (only EPSON mode).

1B 50
27 80

Terminator code. The spacing is set to 17 cpi if the compressed printing has been previously selected by SI or ESC SI command.

ESC M

Sets horizontal spacing to 12 or 20 cpi (only EPSON mode).

1B 4D
27 77

Terminator code. The spacing is set to 20 cpi if the compressed printing has been previously selected by SI or ESC SI command.

ESC :

Sets horizontal spacing to 12 cpi (only IBM mode).

1B 3A
27 58

Terminator code.

ESC g

Sets horizontal spacing to 15 cpi (only EPSON mode).

1B 67
27 103

Terminator code. Compressed printing cannot be combined with 15 cpi.

SI or ESC SI

Selects compressed printing.

0F or 1B 0F
15 or 27

Terminator code. In IBM mode, this command sets horizontal spacing to 17 cpi (compressed spacing). If 12 cpi has been previously set and HOST COMPR 20 CPI has been set in the Configuration Setup, this command sets horizontal spacing to 20 cpi. In EPSON mode, the setting of this command depends on the horizontal spacing previously set: 10 cpi is changed into 17 cpi, 12 cpi is changed into 20 cpi

DC2

Resets compressed spacing.

12 or 1B 12
18 or 27

Terminator code. In IBM mode, the subsequent characters are printed at 10 cpi. In EPSON mode, the 17 cpi compressed spacing is reset to 10 cpi while the 20 cpi compressed spacing is reset to 12 cpi.

DC4 DC4 ESC A {n}

Sets horizontal spacing to 15,17 or 20 cpi.

14 14 1B 41 {n}
20 20 27 65 {n}

Terminator code.The subsequent characters will be printed at the horizontal spacing specified by the {n}:

n	Selection
4	15 cpi
5	17 cpi
6	20 cpi

ESC p {n}

Sets or cancels proportional printing (only EPSON mode).

1B 70 {n}
27 112 {n}

Terminator code. If {n} = {1}, proportional printing is set. If {n} = {0}, proportional printing is reset.

ESC P {n}

Sets or cancels proportional printing (only IBM mode).

1B 50 {n}
27 80 {n}
$0 \leq n \leq 255$

Terminator code. If {n} = {odd number}, proportional printing is set. If {n} = {even number}, proportional printing is reset.

ESC A {n}

Sets variable vertical spacing.

1B 41 {n}
27 65 {n}
1 ≤ n ≤ 85

This command changes the default vertical spacing to n/72 inch. In IBM, the value set by ESC A will be activated when ESC 2 code is received.

ESC 2

Sets vertical spacing to default value.

1B 32
27 50

In IBM mode, the default vertical spacing is the value specified by a previous ESC A command.

In EPSON mode, the default vertical spacing is 1/6 inch.

ESC 0

Sets vertical spacing to 1/8 inch.

1B 30
27 48

ESC 1

Sets vertical spacing to 7/72 inch (only IBM mode).

1B 31
27 49

ESC 3 {n}

Sets vertical spacing to n/216 inch.

1B 33 {n}
27 51 {n}
1 ≤ n ≤ 255 (IBM mode)
0 ≤ n ≤ 255 (EPSON mode)

Setting Tabulations

ESC D {n1}..{nx} NUL

Sets or cancels horizontal tab stops

1B 44 {n1}...{nx} 00
27 68 {n1}...{nx} 0
0 ≤ n ≤ 255

This sequence sets up to 32 (EPSON mode) or 28 (IBM mode) horizontal tab stops after cancelling the current setting. {n1} to {nx} specify the number of columns at which horizontal tab stops are required and must be entered in the sequence in ascending numerical order. If the parameters are not specified, this command cancels horizontal tab stops (ESC D NUL).

HT

Moves logically the print carriage to next horizontal tab stop.

09
9

ESC B {n1}...{nx} NUL

Sets vertical tab stops (IBM mode).
Sets vertical tab stops in channel 0 of Vertical Format Unit (EPSON mode).

1B 42 {n1}...{nx} 00
27 66 {n1}...{nx} 00
1 ≤ n ≤ 255

In IBM mode, this sequence sets up to 64 vertical tab stops at the line number specified by {n1}, {n2} and so on. The tab stops are memorized as logical positions.

In EPSON mode, this code sets up to 16 vertical tab stops at the line specified by {n1}, {n2} and so on in the 0 VFU channel. The tab stops are memorized as physical positions.

This command is ignored if {n} is greater than form length value.

ESC B NUL

Cancels all current vertical tab stops.

1B 42 00
27 66 0

ESC b {m} {n1}... NUL

Sets vertical tab stop in one of the 8 Vertical Format Unit (VFU) channels available (only EPSON mode).

1B 62 {m} {n1}.. 00
27 98 {m} {n1}.. 0
0 ≤ m ≤ 7
1 ≤ n ≤ 255

This sequence sets vertical tabulations in the VFU channel specified by the parameter {m}. Eight channels are available and in each of them you can create a sample page that you can recall

Up to 16 tab stops can be set in each channel at the line specified by {n1}, {n2} and so on in numerical ascending order. To clear the tabs in channel {n} use ESC b {m} NUL

ESC / {m}

Select the Vertical Format Unit (VFU) channel (only EPSON mode).

1B 2F {m}
27 47 {m}
0≤ m ≤ 7

The {m} parameter specifies the VFU channel number.

VT

Advances paper to the next vertical tab stop of the selected VFU channel.

0B
11

Terminator code. It causes the paper to be advanced to the next vertical tab stop set by ESC B or the ESC b commands.

ESC b {m} NUL

Cancels all current vertical tab stops set in the specific VFU channel (only EPSON mode).

1B 62 {m} 00
27 98 {m} 0
0 ≤ m ≤ 7

The {m} parameter specifies the VFU channel number.

ESC R

Sets horizontal and vertical tab stops to default values (only IBM mode).

1B 52
27 82

This command sets horizontal tab stops every eight colums starting from column 9, and cancels all vertical tab stops.

Setting Print Attributes

SO or ESC SO

Sets double width printing.

0E or 1B 0E
14 or 27 14

DC4

Cancels double width printing.

14
20

ESC W {n}

Sets or cancels double width printing.

1B 57 {n}
27 87 {n}
0 ≤ n ≤ 255

If {n} = {odd number}, double width printing is set. If {n} = {even number}, double width printing is reset.

ESC [@ {l} {h} {m1}...{m4}

Changes height and width of characters and modifies vertical spacing appropriately (only IBM mode).

1B 5B 40 {l} {h} {m1}...{m4}
27 91 64 {l} {h} {m1}...{m4}

The {l} and {h} parameters specifies the number of {mx} mode bytes contained in the sequence (normally l=4 and h=0). The {m1} and {m2} parameters must be equal to 0. The {m3} and {m4} parameters specify the printing characteristics.

The {m3} high nibble specifies the line feed multiplier; {m3} low nibble specifies the height multiplier:

m3	Selection
00	No change
01	Standard character height
02	Double character height
16	Single line feed, no change
17	Single line feed, standard character height
18	Single line feed, double character height
32	Double line feed, no change
33	Double line feed, standard character height
34	Double line feed, double character height

The {m4} high nibble is discarded; the {m4} low nibble specifies the width multiplier:

m4	Selection
00	No change
01	Standard character width
02	Double character width

ESC w {n}

Sets or cancels double high printing (only EPSON mode).

1B 77 {n}
27 119 {n}
0 ≤ n ≤ 255

If {n} = {odd number}, double height printing is set. If {n} = {even number}, double height printing is reset.

ESC E

Sets emphasized printing.

1B 45
27 69

ESC F — **Cancels emphasized printing.**

1B 46
27 70

ESC G — **Sets double strike printing.**

1B 47
27 71

ESC H — **Cancels double strike printing.**

1B 48
27 72

ESC S {n} — **Sets subscript or superscript printing.**

1B 53 {n}
27 83 {n}
0 ≤ n ≤ 255

If {n} = {odd number}, subscript printing is set. If {n} = {even number}, superscript printing is set.

ESC T — **Cancels subscript or superscript printing.**

1B 54
27 84

ESC 4 — **Sets italics printing (only EPSON mode) .**

1B 34
27 52

ESC 5 — **Cancels italics printing (only EPSON mode).**

1B 35
27 53

ESC - {n} — **Sets or cancels underlined printing.**

1B 2D {n}
27 45 {n}
0 ≤ n ≤ 255

If {n} = {odd number}, underlined printing is set. If {n} = {even number}, underlined printing is reset.

ESC _ {n}

Sets or cancels overscore printing (only IBM mode).

1B 5F {n}
27 95 {n}
0 ≤ n ≤ 255

If {n} = {odd number}, overscore printing is set. If {n} = {even number}, overscore printing is reset.

ESC ! {n}

Selects printing mode (only EPSON mode).

1B 21 {n}
27 33 {n}
0 ≤ n ≤ 255

This command is used to select any valid combinations of printing attributes, each of them being selected by the {n} value, as follows:

n	Attribute	n	Attribute
0	10 cpi	16	Double strike
1	12 cpi	32	Double width
2	Proportional	64	Italics
4	Compressed	128	Underlined
8	Emphasized		

The value of {n} equals the sum of the values of each attribute.

ESC r {n}

Selects ribbon color (only EPSON mode).

1B 72 {n}
27 114 {n}
0 ≤ n ≤ 6

The {n} parameter specifies the colour type:

0	Black
1	Magenta

2	Cyan
3	Violet (Cyan on Magenta)
4	Yellow
5	Orange (Magenta on Yellow)
6	Green (Cyan on Yellow)

ESC b **Selects black ribbon band (only IBM mode).**

1B 62
27 98

ESC c **Selects cyan ribbon band (only IBM mode).**

1B 63
27 99

ESC m **Selects magenta ribbon band (only IBM mode).**

1B 6D
27 109

ESC y **Selects yellow ribbon band (only IBM mode).**

1B 79
27 121

Paper Movements

LF **Advances paper one line.**

0A
10

Terminator code. It advances paper one line at the current vertical spacing.

ESC 5 {n}

Sets an automatic line feed after a carriage return (only IBM mode).

1B 35 {n}
27 53 {n}
0 ≤ n ≤ 255

If {n} is equal to {odd number}, this command sets an automatic line feed on receiving a CR code. If {n} is equal to {even number}, this command cancels the automatic line feed.

ESC]

Sets a reverse line feed (only IBM mode).

1B 5D
27 93

terminator code. It causes the paper to be moved oneline at the current vertical spacing.

FF

Advances paper to the top of next page.

0C
12

Terminator code. It advances the paper to the first printable line of the next form. If single sheet has been loaded, this code causes the sheet ti be ejected.

ESC J {n}

Advances paper n/216 inch.

1B 4A {n}
27 74 {n}
1 ≤ n ≤ 255

Terminator code. It causes the paper to be advanced n/216 inch.

ESC j {n}

Reverses paper n/216 inch (only EPSON mode).

1B 6A {n}
27 106 {n}
1≤ n ≤ 255

Terminator code. The paper reverses n/216 inch.

Character Set Selection

ESC 7 **Selects Character Set 1.**

1B 37
27 55

ESC 6 **Selects Character Set 2.**

1B 36
27 54

ESC t {n} **Selects Character table (only EPSON mode).**

1B 74 {n}
27 116 {n}
0 ≤ n ≤ 2

If {n} is equal to {0}, this code selects the EPSON Standard Italic Character set.
If {n} is equal to {1}, this code selects the IBM Standard extended Character Set.

ESC R {n} **Selects national character set (only EPSON mode).**

1B 52 {n}
27 82 {n}
0 ≤ n ≤ 12

This code causes subsequent data to be printed using the national character set selected by {n}, as follows:

n	Nation
0	USA-IBM PC Compatible
1	France
2	Germany
3	United Kingdom
4	Denmark-1
5	Sweden
6	Italy

7	Spain-1
8	Japan
9	Norway
10	Denmark-2
11	Spain -2
12	Latin -America

ESC k {n}

Selects fonts (only EPSON mode).

1B 6B {n}
27 107 {n}
n =0,128,129,182

This sequence allows you to select font type. See the following table:

n	Font
0	Courier
128	OCR-B
129	OCR-A
182	DLL

DC4 DC4 ESC g {n}

Selects resident fonts (Printer Specific mode).

14 14 1B 67 {n}
20 20 27 103 {n}
n =0,128,182

This sequence allows the font type selection using the same values of {n} parameter as ESC k. If {n} ={0}, the Courier font is selected. If {n} ={128}, the OCR-B font is selected.If {n} ={129}, the OCR-A font is selected. If {n} ={182}, the DLL font is selected.

DC4 DC4 ESC S {n}

Selects Code Pages (Printer Specific mode).

14 14 1B 53 {n}
20 20 27 83 {n}
128 ≤ n ≤ 132

This sequence allows you to select the Code Pages. See the following table:

1	ISO 8859/1 (Latin 1)
2	ISO 8859/2 (Latin 2)
n	Code Page
128	CP 437 (USA)
129	CP 850 (Multilingual)
130	CP 860 (Portugal)
131	CP 863 (France/Canada)
132	CP 865 (Denmark/Norway)
137	CP 852 (Latin 2)

Automatic Sheet Feeder Commands

ESC EM {n}

Ejects single sheet and selects or deselects the Automatic Sheet Feeder (only EPSON mode).

1B 19 {n}
27 25 {n}
n = 0,1,2,4

This sequence performs different functions according to {n} parameter:

n	Function
0	ASF disabled after paper ejection
1	Tray 1 selected
2,3	Tray 2 selected
4	Previous selected tray is selected

ESC EM R

Ejects paper and selects the semi-automatic loading (only EPSON mode).

1B 19 52
27 25 82

This command causes the paper previously inserted with ASF to be ejected and then the next sheet can be loaded semi-automatically.

DC4 DC4 ESC 5

Ejects paper without loading a new single sheet (Printer Specific mode).

14 14 1B 35
20 20 27 53

Terminator code.

DC4 DC4 ESC 8

Loads single sheet from tray 1 (Printer Specific mode).

14 14 1B 38
20 20 27 56

Terminator code. It causes a single sheet to be loaded from tray 1.

DC4 DC4 ESC 9

Loads single sheet from tray 2 (Printer Specific mode).

14 14 1B 39
20 20 27 57

Terminator code. It causes a single sheet to be loaded from tray 2.

Printing Dot Graphics

ESC K {n1} {n2} {p1}...{px}

Prints normal density dot graphics (60 dpi).

1B 4B {n1} {n2} {p1}...{px}
27 75 {n1} {n2} {p1}...{px}
0 ≤ n1 ≤ 255
0 ≤ n2 ≤ 3

Terminator code. This command prints dot graphics at 60 horizontal dot per inch. The parameter values should be calculated as follows:

n1	Remainder of the number of columns divided by 256
n2	Integer result of the previous division

p1	Sum of the values corresponding to the dots that should be printed in the first column of the graphics pattern
p2	Sum of the values corresponding to the dots that should be printed in the second column of the graphics pattern
px	Sum of the values corresponding to the dots that should be printed in the last column of the graphics pattern

ESC L {n1} {n2} {p1}...{px}

Prints double density dot graphics at half speed (120 dpi).

1B 4C {n1} {n2} {p1}...{px}
27 76 {n1} {n2} {p1}...{px}
0 ≤ n1 ≤ 255
0 ≤ n2 ≤ 6

Terminator code. See ESC K description.

ESC Y {n1} {n2} {p1}...{px}

Prints double density dot graphics at normal speed (120 virtual dpi).

1B 59 {n1} {n2} {p1} {p2}...{px}
27 42 {n1} {n2} {p1} {p2}...{px}
0 ≤ n1 ≤ 255
0 ≤ n2 ≤ 6

Terminator code. See ESC K description.

ESC Z {n1} {n2} {p1}...{px}

Prints quadruple density dot graphics (240 virtual dpi).

1B 5A {n1} {n2} {p1} {p2}...{px}
27 90 {n1} {n2} {p1} {p2}...{px}
0 ≤ n1 ≤ 255
0 ≤ n2 ≤ 12

Terminator code. See ESC K description.

ESC * {m} {n1} {n2} {p1}...{px}

Sets dot graphics mode (only EPSON mode).

1B 2A {m}{n1}{n2} {p1}...{px}
27 42 {m}{n1}{n2} {p1}...{px}
0 ≤ m ≤ 7
0 ≤ n1 ≤ 255 , 0 ≤ n2 ≤ 12

Terminator code. See the following table:

m	Mode	dpi
0	Normal density	60
1	Dual density	120
2	Dual speed, dual density	120 (virtual)
3	Quadruple density	240 (virtual)
4	CRT Graphics I	80
5	Plotter Graphics	72
6	CRT Graphics II	90
7	Dual density plotter graphics	144

ESC ? {n} {m}

Reassign the graphics mode.(only EPSON mode)

1B 3F {n} {m}
27 63 {n} {m}
n = 75,76,89,90
0 ≤ n ≤ 7

This command changes one graphics mode to another. The parameter {n} specifies a character (K,L,Y or Z) which is reassigned to specific mode {m} = 0-7.

Setting Down-line Loading

ESC : NUL NUL NUL

Copies the character generator in ROM to RAM (only EPSON mode)

1B 3A 00 00 00
27 58 0 0 0

This sequence copies the character generator in ROM into the RAM area dedicated to the down-line loading of Draft characters.

ESC & NUL

Defines down-line loaded characters (only EPSON mode).

1B 26 00 {n} {m} {an} {pn0} .... {pn10} {am} {pm0}....{pm10}
27 38 0 {n} {m} {an} {pn0} .... {pn10} {am} {pm0}....{pm10}

The down-line loading of characters is the printer feature which allows the definition of special characters not present in the character sets.The parameters in the command have the following meaning:

{n},{m} are the two decimal numbers that define the first and the last characters to be replaced in the character set in use. If you want to replace only one character, {m} must be equal to {n}. Any value in the range {0} to {127} will accepted even if it is advisable not to define the code {32}, which is the space character.

{an} is the sum of: dn +(sn x 16) +(en +1), where dn =0 if the character is a true descender, dn= 128 if the character is not a true descender, sn = start firing column (0≤sn≤7), en =end firing column.

{pn0}...{pn10} represent the columns of dots that constitute the new character that replaces the character with the decimal code {n}.

{am}{pm0}...{pm10} have the same meanings as the {n}-parameters,but relate to the new character that replaces the character with the decimal code {m}.

ESC % {1} NUL

Selects the use of downloaded character set in RAM (only EPSON mode).

1B 25 {01} 00
27 37 {1} 0

This sequence selects the use of the redefined Draft or Quality character(s) in RAM according to the current selection.

ESC % {0} NUL

Selects the character generator in ROM (only EPSON mode).

1B 25 {00}00
27 37 {0} 0

This sequence causes downloaded character redefinitions to be ignored and selects the character set and the printing type (Draft or Quality) set before performing the down-line loading.

ESC = {n} {m} {35} {p} {a1} ...

Defines down-line loaded character (only IBM mode).

1B 3B {n} {m} {23} {p} {a1} {a2} {p0}..{p10}
27 61 {n} {m} {35} {p} {a1} {a2} {p0}..{p10}

This sequence allows to design and then down-line load special character not present in the character set in use. It also allows to change one character with another character. Whenever you would like to start the DLL setting procedure, it shoul be better to copy the character generator in ROM into RAM by turning the printer off then on again or by sending the ESC ={0} {0} sequence that causes the DLL to be reset. Up to 256 characters can be defined using the DLL function. The parameters in the command have the following meaning:

{n},{m}	indicate how many characters you should down line load. {n} and {m} are calculated as follows: {number of character x 13} +2 = {total}; if {total} is less than {256}: {n} ={t} , {m} = {0}; if {total} is greater than {256}: {n} ={remainder of {t} divided by 256}, {m} ={integer result of {t} divided by 256}	
{id}	is the printer identifier. In this case is fixed to {35}.	
{p}	is the decimal code of the first character of the character set in use that should be replaced by the DLL character.	
{a1}	is the first attribute byte and it has the following meaning:	
	Bit 7	{0} indicates that the character is not a true descender, {1} indicates that the character is a true descender. This bit is ignored if the bit 0 or bit 1 is set to 1.
	Bit 6 to 2	ignored.
	Bit 1,0	Character description
		{00} no 12-high expansion. The bit 7 is valid. {01} line drawing character. The dots in row 8 are extended downward to rows 9, 10, 11 and 12. The bit 7 is ignored. It is advisable to use this mode to create characters that should replace 179 to 223 code characters. {11} shading character. The dots in rows 1, 2, 3 and 4 are repeated as rows 9, 10, 11 and 12. The Quality printing is ignored. It is advisable to use this mode to create characters that should replace 176 to 178 code characters.

{a2}	is the second attribute byte. It specifies the proportional printing information. If you do not wish to define a proportional character, set the bit 6 - 0 to {0}, the databytes of the character will be printed:	
	Bit 7	ignored
	Bit 6,5,4	interpreted as a binary number. These bits specify the number of leading bytes that should be ignored. This number is the offset. Up to 7 bytes can be ignored. The count begins with byte 1.
	Bit 3 to 0	interpreted as a binary number. These bits specify the number of dots-columns that should be printed. Each character must be followed by a blank byte that is not included in the count of the character widths greater than 11 are treated as 11.
{p0}..{p10}	are the decimal numbers that represents the columns of dots that constitute the new character that replaces the character with the decimal code {p}.	

To select the printing type (Draft or Quality) of your new DLL character, see ESC I {n} command description.

Bar Code Commands

DC4 DC4 ESC ! {n} 1 {p} EM

Selects EAN-8 bar code (Printer Specific mode).

14 14 1B 21 {n} 01 {p} 19
20 20 27 33 {n} 1 {p} 25

$1 \leq n \leq 12$

$0 \leq p \leq 1$

The EAN-8 bar code data field must only contain numeric data, and must be eight bytes long, check digit included. The EAN-8 character repertoire provides 0 to 9 ASCII numeric figures. {n} indicates the bar code height in units of 1/6 inch and must be in the range 1 to 12. {p} must be NUL (hex. 00) if no Human Readable Characters are to be printed, and 1 (hex. 01) if they are to be printed. The range of values for {n} and {p} parameters may be increased by 32 dec. HRC will use the OCR-B font.

DC4 DC4 ESC ! {n} 2 {p} EM

Selects EAN-13 bar code (Printer Specific mode).

14 14 1B 21 {n} 02 {p} 19
20 20 27 33 {n} 2 {p} 25
$1 \leq n \leq 12$
$0 \leq p \leq 1$

The EAN-13 bar code data field must only contain numeric data, and must be 13 bytes long, check digit included. The EAN-13 character repertoire provides 0 to 9 ASCII numeric figures. {n} indicates the bar code height in units of 1/6 inch and must be in the range 1 to 12. {p} must be NUL (hex. 00) if no Human Readable Characters are to be printed, and 1 (hex. 01) if they are to be printed. The range of values for {n} and {p} parameters may be increased by 32 dec. HRC will use the OCR-B font.

DC4 DC4 ESC ! {n} 3 {p} EM

Selects UPC-A bar code (Printer Specific mode).

14 14 1B 21 {n} 03 {p} 19
20 20 27 33 {n} 3 {p} 25
$1 \leq n \leq 12$
$0 \leq p \leq 1$

This sequence selects the UPC-A bar code. The data field allows 10 numeric characters plus one system number digit and one check digit, at the leftmost and rightmost positions respectively. The UPC-A character repertoire provides 0 to 9 ASCII numeric figures. {n} indicates the bar code height in units of 1/6 inch and must be in the range 1 to 12. {p} must be NUL (hex. 00) if no Human Readable Characters are to be printed, and 1 (hex. 01) if they are to be printed. The range of values for {n} and {p} parameters may be increased by 32 dec. HRC will use the OCR-B font.

DC4 DC4 ESC ! {n} 17 {p} EM

Selects 2/5 INTERLEAVED bar code (PrinterSpecific mode).

14 14 1B 21 {n} 11 {p} 19
20 20 27 33 {n} 17 {p} 25
$1 \leq n \leq 12$
$0 \leq p \leq 1$

This sequence selects the 2/5 INTERLEAVED bar code.This code does not have a defined format length. However, the total sum of the characters must be even. The supported character set only provides ASCII numeric figures 0 to 9. {n} indicates the bar code height in units of 1/6 inch and must be in the range 1 to 12. {p} must be NUL (hex. 00) if no Human Readable Characters are to be printed, and 1 (hex. 01) if they are to be printed. The range of values for {n} and {p} parameters may be increased by 32 dec. HRC will use the OCR-A font.

DC4 DC4 ESC ! {n} 18 {p} EM

Selects 2/5 INDUSTRIAL bar code (Printer Specific mode).

14 14 1B 21 {n} 12 {p} 19
20 20 27 33 {n} 18 {p} 25

$1 \leq n \leq 12$

$0 \leq p \leq 1$

This sequence selects the 2/5 INDUSTRIAL bar code.The data format length is variable. The supported character set only provides ASCII numeric figures 0 to 9. {n} indicates the bar code height in units of 1/6 inch and must be in the range 1 to 12. {p} must be NUL (hex. 00) if no Human Readable Characters are to be printed, and 1 (hex. 01) if they are to be printed. The range of values for {n} and {p} parameters may be increased by 32 dec. HRC will use the OCR-A font.

DC4 DC4 ESC ! {n} 19 {p} EM

Selects 2/5 MATRIX bar code (Printer Specific mode).

14 14 1B 21 {n} 13 {p} 19
20 20 27 33 {n} 19 {p} 25

$1 \leq n \leq 12$

$0 \leq p \leq 1$

This sequence selects the 2/5 MATRIX bar code.The data format length is variable. The supported character set only provides ASCII numeric figures 0 to 9. {n} indicates the bar code height in units of 1/6 inch and must be in the range 1 to 12. {p} must be NUL (hex. 00) if no Human Readable Characters are to be printed, and 1 (hex. 01) if they are to be printed. The range of values for {n} and {p} parameters may be increased by 32 dec. HRC will use the OCR-A font.

DC4 DC4 ESC ! {n} 20 {p} EM

Selects CODE 39 bar code (Printer Specific mode).

14 14 1B 21 {n} 14 {p} 19
20 20 27 33 {n} 20 {p} 25

$1 \leq n \leq 12$

$0 \leq p \leq 1$

This sequence selects the CODE 39 bar code.The data format length is variable and must always start and end with an asterisk. It can contain the alphanumeric character listed below:
0 1 2 3 4 5 6 7 8 9
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
- . SPACE $ / + & * (as start/stop character).
{n} indicates the bar code height in units of 1/6 inch and must be in the range 1 to 12. {p} must be NUL (hex. 00) if no Human Readable Characters are to be printed, and 1 (hex. 01) if they are to be printed. The range of values for {n} and {p} parameters may be increased by 32 dec. HRC will use the OCR-A font.

DC4 DC4 ESC ! {n} 22 {p} EM

Selects CODABAR bar code (Printer Specific mode).

14 14 1B 21 {n} 16 {p} 19
20 20 27 33 {n} 22 {p} 25

1 ≤ n ≤ 12

0 ≤ p ≤ 1

This sequence selects the CODABAR bar code.The data format length is variable and must always be included between a couple of specific start/stop terminators chosen among the following combinations:
0 1 2 3 4 5 6 7 8 9
- $: / . + A B C D
T N * E
{n} indicates the bar code height in units of 1/6 inch and must be in the range 1 to 12. {p} must be NUL (hex. 00) if no Human Readable Characters are to be printed, and 1 (hex. 01) if they are to be printed. The range of values for {n} and {p} parameters may be increased by 32 dec. HRC will use the OCR-A font.

DC4 DC4 ESC ! {n} 23 {p} EM

Selects CODE 128 bar code (Printer Specific mode).

14 14 1B 21 {n} 17 {p} 19
20 20 27 33 {n} 23 {p} 25

1 ≤ n ≤ 12

0 ≤ p ≤ 1

This sequence selects the CODE 128 bar code.The data format length is variable. It can contain the full standard ASCII Character Set plus set of Function Control Codes FNC-1, FNC-2, FNC-3, FNC-4 coded from Hex.80 to Hex.83.The START, STOP, SHIFT and CODE control characters are automatically generated in order to obtain the shortest bar code symbol from the given data. The check digit character will be automatically inserted before the STOP character.{n} indicates the bar code height in units of 1/6 inch and must be in the range 1 to 12. {p} must be NUL (hex. 00) if no Human Readable Characters are to be printed, and 1 (hex. 01) if they are to be printed. The range of values for {n} and {p} parameters may be increased by 32 dec. HRC will use the OCR-A font.

DC4 DC4 ESC ! {n} 24 {p} EM

Selects POSTNET bar code (Printer Specific mode).

14 14 1B 21 01 18 {p} 19
20 20 27 33 1 24 {p} 25
$0 \leq p \leq 1$

This sequence selects the POSTNET bar code.The data field must contain numeric data only. {p} must be NUL (hex. 00) if no Human Readable Characters are to be printed, and 1 (hex. 01) if they are to be printed.

DC4 DC4 ESC (GS {n1} {data} GS {n2} {data}..... EM

Prints bar code symbols (Printer Specific mode).

14 14 1B 28 1D {n1} {data} 19
20 20 27 40 29 {n1} {data}..... 25
$1 \leq n \leq 255$

This sequence causes the bar code symbol to be printed according to the previous selection.To print more than one bar code symbol of the same type and height, GS {n} defines the distance from the beginning of the line or between two bar code symbols in multiples of 1/72 inch. At the end of the line, this command must be closed by EM.

Miscellaneous

BEL

Sounds the buzzer.

07
7

This command sounds the buzzer for about 1 seconds.

BS

Moves the printer carriage one character to the left.

08
8

Terminator code. This code causes the printing to be continued from one column to the left of the current carriage position.

CAN

Cancels data on same line.

18
24

This command causes the printer to delete data in the same line before the CAN code. Commands except SO and ESC SO are not affected.

DEL

Deletes last character sent (only EPSON mode).

7F
127

This command causes the printer to delete the last character sent to the printer. This does not affect control codes.

CR

Causes all received data to be printed out.

0D
13

Terminator code.

The column counter is set to the left margin value and a line feed is inserted automatically after carriage return A line feed may be added if the AUTOFEEDXT signal is held LOW and the AUTO XT function is selected in the Printer Setup.

DC4 DC4 ESC Y {n}

Selects emulations (Printer Specific mode).

14 14 1B 59 {n}
20 20 27 89 {p}
$0 \leq n \leq 2$

This sequence selects the printer emulation type according to the {n} parameter value: {1} sets the EPSON EX-1000 emulation; {2} sets the IBM Proprinter XL emulation.

DC 1

Selects printer.

11
17

In IBM mode, this command causes the printer to be enabled after it has been disabled by an ESC Q {22} command. In EPSON mode, this command causes the printer to be enabled after it has been disabled by DC3 code (the SELECTIN signal was HIGH). The SELECT signal goes high and the characters between DC3 and DC1 codes are discarded. If you selected `SLCT IN` in the Printer Setup, the DC1 code is ignored.

DC 3

Deselects printer (only EPSON mode).

13
19

If you send this command when the SELECTIN signal is high, it causes the printer to be disabled so that the SELECTIN signal goes low and the characters between DC3 and DC1 codes are discarded. If the SELECTIN signal is low or if you selected `SLCT-IN` in the Printer Setup, the DC3 code is ignored.

ESC Q {22}

Deselects printer (only IBM mode).

1B 51 {16}
27 81 {22}

This code causes the incoming data to be discarded until a DC1 code is received.

ESC x {n}

Selects Quality or Draft printing (only EPSON mode).

1B 78 {n}
27 120 {n}
$1 \leq n \leq 255$

Terminator code. If n = {even number} Draft printing is selected. If n = {odd number} Quality printing is selected.

ESC I {n}

Selects printing mode (only IBM mode).

1B 49 {n}
27 73 {n}
n =0,2,4,6

Terminator code. The printing mode, font and down-line loading of characters are selected according to the parameter setting. See the following table:

n	Selection
0	Draft
2	Quality
4	DLL Draft
6	DLL Quality

DC4 DC4 ESC p {n}

Selects Quality printing type (Printer Specific mode).

14 14 1B 70 {n}
20 20 27 112 {n}
n = 2,4,5

Thie command selects the type of Quality printing according to the {n} parameter value:

n	Selection
2	Quality
4	Draft matrix 9(V)x 12(H)
6	Draft matrix 9(V)x 10(H)

ESC \ {n} {m}

Prints characters from IBM PC Character Set (only IBM mode).

1B 5C {n} {m}
27 92 {n} {m}
0 ≤ n ≤ 255
0 ≤ m ≤ 255

This sequence specifies that subsequent characters are to come from the table of all printable characters (IBM PC Character Set). The {n} parameter specifies the remainder of the number of characters that you want to print divided by 256. The {m} parameter specifies the integer result of the number of characters that you want to print divided by 256. The control codes are not recognized as long as this sequence is active. The space character is printed as an unassigned character.

ESC ^ {n}

Prints one character from IBM PC Character Set (only IBM mode).

1B 5E {n}
27 94 {n}
0 ≤ n ≤ 255

This sequence specifies that subsequent character {n}is to come from the table containing all the printable characters.

ESC U {n}

Sets and cancels monodirectional printing.

1B 55 {n}
27 85 {n}

In IBM, if the parameter {n} is equal to {odd number}, this sequence causes subsequent data to be printed monodirectionally, from left to right, instead of bidirectionally. To cancel monodirectional printing and return to bidirectional printing, {n} must be equal to {even number}. In EPSON, if the parameter {n} is equal to {1}, tis sequence causes subsequent data to be printed monodirectionally, from left to right, instead of bidirectionally. To cancel monodirectional printing and return to bidirectional printing, {n} must be equal to {0}. When the printer is turned on, however, printing is performed bidirectionally.

ESC <

Prints characters from left to right for only one line (only EPSON mode).

1B 3C
27 60

This sequence causes subsequent characters to be printed from left to right (monodirectionally) for one line only. It is cancelled by a CR.

ESC @

Re-initializes the printer (only EPSON mode).

1B 40
27 64

This sequence causes the printer to be initialized. This command, inserted in the input buffer, will be executed during processing, so that data preceding this command will be printed according to previous setting. This code goes back to current Printer Setup setting, that is, the most recent values set, cancels any print attributes that have been set, initializes the printer carriage, resets the column counter, sets the horizontal tabulations every eight columns, clears all vertical tabulations set. Only the selection of Draft or Quality printing and the selected character generator are maintained.

DC4 DC4 ESC @

Re-initializes the printer (Printer Specific mode).

14 14 1B 40
20 20 27 64

ESC >

Set the 8th bit of the byte to 1 (only EPSON mode).

1B 3E
27 62

This command sets Most Significant Bit of each data as 1.

ESC =

Set the 8th bit of the byte to 0 (only EPSON mode).

1B 3B
27 61

This command sets Most Significant Bit of each data as 0.

ESC

Cancel Most Significant Bit control (only EPSON mode).

1B 23
27 35

This command cancels the Most Significant Bit control set by ESC = or ESC <.

ESC SP {n}

Sets intercharacter space (only EPSON mode).

1B 20 {n}
27 32 {n}
0 ≤ n ≤ 255

This command sets the intercharacter space to n/120 inch in Draft and n/180 inch in Quality.

ESC $ {n} {m}

Sets absolute dot position (only EPSON mode).

1B 24 {n} {m}
27 36 {n} {m}
0 ≤ n, m ≤ 255

The dot position is calculated as {m}*256+{n}.

ESC \ {n} {m}

Sets relative dot position (only EPSON mode).

1B 5C {n} {m}
27 92 {n} {m]
0 ≤ n, m ≤ 255

This command sets the relative dot position, so that the print head is moved to a dot position specified relative to its current position. The unit of the dot is 1/120 inch. The Right Side position is calculated as {m}*256+{n}. The Left Side position as 65536-{m}*256+{n}.

ESC d {n} {m}

Spaces forwards relative dot position (only IBM mode).

1B 64 {n} {m}
27 100 {n} {m}
0 ≤ n, m ≤ 255

This command causes the print head to be moved to a dot position calculated as {n+m*256}/120 inch on the right of its current dot position. If the selected position is outside the current right margin, it is forced to last column.

ESC e {n} {m}

Spaces backwards relative dot position (only IBM mode).

1B 65 {n} {m}
27 101 {n} {m}
0 ≤ n, m ≤ 255

This command causes the print head to be moved to a dot position calculated as {n+m*256}/120 inch on the left of its current dot position. If the selected position is outside the current left margin, it is forced to first column.

ESC a {n}

Selects justification mode (only EPSON mode).

1B 61 {n}
27 97 {n}
0 ≤ n ≤ 3

This command causes the text to be justified according to the value of the {n} parameter:

n	Selection
1	Left justification
2	Centered justification
3	Right justification
6	Full justification

ESC s {n}

Sets and resets the Quiet printing (only EPSON mode).

1B 73 {n}
27 115 {n}
0 ≤ n ≤ 255

If {n} is equal to {odd number}, the Quiet printing is set. If {n} is equal to {even number}, the Quiet printing is reset.

ESC 8

Disables the printer control of the paper end condition (only EPSON mode).

1B 38
27 56
0 ≤ n ≤ 255

ESC 9

Enables the printer control of the paper end condition (only EPSON mode).

1B 38
27 56
0 ≤ n ≤ 255

DC4 DC4 ESC J {v} {h}

Sets Macro characters (Printer Specific mode).

14 14 1B 4A {v} {h}
20 20 27 74 {v} {h}
1 ≤ v, h ≤ 255

This command enables printing of macro characters with an horizontal scaling factor equal to {h} and a vertical scaling factor to {v}.

DC4 DC4 ESC I

Reset Macro Character (Printer Specific mode).

14 14 1B 49
20 20 27 73

This command disables printing of macro characters.

DC4 DC4 ESC H {v} {h}

Sets Macro character relative position (Printer Specific mode).

14 14 1B 48 {v} {h}
20 20 27 72 {v} {h}

$0 \leq v \leq 255$

$0 \leq h \leq 255$

This command sets the relative position of a macro character allowing an horizontal displacement {h} and a vertical displacement {v}. The unit of {h} is 1/120 inch and the unit of {v} is 1/72 inch.

Configuring Your Printer

This appendix describes how to configure your printer on the various IBM systems. It is helpful for you to read this appendix because it shows step by step the configuration procedure on the IBM System/36 and Application System/400.

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System/36 Connection

Suggestions

Information about configuration can be found in:

PERFORMING THE FIRST SYSTEM CONFIGURATION FOR YOUR SYSTEM 5360. Chapter 4 (IBM order no. SC21-9022)

CHANGING YOUR SYSTEM CONFIGURATION. Chapter 2 (IBM order no. SC21-9052)

Configuration Procedure

- Key CNFIGSSP and press ENTER

- CNFIGSSP - MAIN MENU
  Select 2. Create, change or delete a configuration member
  Press ENTER

- CONFIGURATION MEMBER DEFINITION
  Select option 1 change an existing configuration member
  Member SYSCNFIG
  Library #CNFGLIB
  Press ENTER

- CONFIGURATION MEMBER DESCRIPTION
  Press ENTER when configuration is correct

- CONFIGURATION MEMBER MENU
  Select 1. Work with display stations and printers
  Press ENTER

- ❑ If the printer is localy attached continue to CONFIGURATION-DISPLAY STATION AND PRINTER MENU (Select 1) Go to A
- ❑ If the printer is remotely attached, go to CONFIGURATION-DISPLAY STATION AND PRINTER MENU (Select 3) Go to B

Step A.

- CONFIGURATION-DISPLAY STATION AND PRINTER MENU
  Select 1. Add or delete local display stations and printers
  Press ENTER

- CNFIGSSP-3262 PRINTER DEFINITION
  Select Y/N
  Press ENTER

- CNFIGSSP-WORK STATION DEFINITION LOCAL
  Move to the selected printer address and key in PH (IPDS printers)
  If they are several printers, key in PH for each one
  Press ENTER
  Proceed through CONFIGURATION-DISPLAY STATION AND PRINTER MENU (Select 7)
  Go to step C

Step B.

- CONFIGURATION-DISPLAY STATION AND PRINTER MENU
  Select 3. Add or delete remote controllers, display stations and printers
  Press ENTER
  Get to the desired REMOTE CONTROLLER DEFINITION
  Press ENTER

- CNFIGSSP-WORK STATION DEFINITION REMOTE
  Move to the selected printer address and key in PH (IPDS printers)
  If they are several printers, key in PH for each one
  Press ENTER
  When you get to the last printer you wanted to configure, press F3
  Proceed through CONFIGURATION-DISPLAY STATION AND PRINTER MENU (Select 7)

Step C.

- CONFIGURATION-DISPLAY STATION AND PRINTER MENU
  (Select 7). Change display station or printer characteristics
  Press ENTER

- CNFIGSSP - CHARACTERISTICS ASSIGNMENT
  Select the characteristics for each printer you have configured
  Press ENTER
  Printer ID may be changed using option 6
  Subconsole may be assigned to a printer using option 5
  Printer may be assigned as default to a display station (opt 4)
  When all the printers are set, press F3

- CONFIGURATION-DISPLAY STATION AND PRINTER MENU
  Select 11. Return to previous menu
  Press ENTER

- CONFIGURATION MEMBER MENU
  Select 5. Save configuration member and return to main menu
  Press ENTER

- CNFIGSSP - MAIN MENU
  Select 12. Apply change to master configuration record
  Press ENTER

- CONFIGURATION MEMBER DEFINITION
  Member SYSCNFIG
  Library #CNFGLIB
  Press ENTER

- CNFIGSSP-CHANGE MASTER CONFIGURATION
  Select 3. Display stations and printers
  Select Y/N for a Configuration printout
  Press ENTER
  Then the System will perform an IPL

☞ ***SSP release has to be 5.1 or higher 5294 remote controller must have extended function #3601 IPDS printers are not supported by 5251-12 remote controller***

Application System/400 Connection

Suggestions

Information about configuration can be found in:

AS/400 DEVICE CONFIGURATION GUIDE (IBM order no. SC21-8106)

☞ ***If you want to configure a printer and another device has already been configured at the same address, it has to be deleted first.***

To delete a device, it has to be varied off first:

Key in WRKDEVD and press F4
Device description *ALL press ENTER
Press F14 (work with status)
Select option 2 (vary off) in front of device to be varied off
Press F12 (previous)
Select option 4 (delete) in front of the device to be deleted
Press ENTER

☞ ***If AUTO-CONFIGURATION is enabled, set up your printer address and attach it to the system. Configuration will be created automatically. Do not forget to delete previously configurated device first.***

Configuration Procedure

- AS/400 MAIN MENU
  Key in CRTDEVPRT (create device description for printer)
  Press F4
  Fill in the screen

- ☐ If the printer is localy attached continue to step A
- ☐ If the printer is remotely attached, go to step B

(You can press F4 in a field for a list of possible values)

Step A.

Device description	(DEVD)	Name (i.e. PRT01)
Device class	(DEVCLS)	*LCL for local
Device type	(DEVTYPE)	*IPDS NOT 4224!
Device model	(MODEL)	0 then press ENTER
Port number	(PORT)	Port (0 to 7)
Switch setting	(SWTSET)	Address (0 to 6)
Online at IPL	(ONLINE)	*YES/*NO
Attached Controller	(CTL)	Controller name (i.e. CTL01)
Font Identifier	(FONT)	i.e. 026 for 10 CPI draft
Form Feed	(FORMFEED)	*CONT then press ENTER
Printer Error Message	(PRTERRMSG)	*INQ
Message Queue	(MSGQ)	QSYSOPR
Library		*LIBL
Text 'description'	(TEXT)	i.e. 7030TAx printer Port A Add Y

Step B.

Device description	(DEVD)	Name (i.e. R5394PRT01)
Device class	(DEVCLS)	*RMT for remote
Device type	(DEVTYPE)	*IPDS NOT 4224!
Device model	(MODEL)	0 then press ENTER
Local Location Address	(LOCADR)	00-FF controller dependent (see Help)
Online at IPL	(ONLINE)	*YES/*NO
Attached Controller	(CTL)	Controller name
Font Identifier	(FONT)	i.e. 026 for 10 CPI draft
Form Feed	(FORMFEED)	*CONT then press ENTER

Printer Error Message	(PRTERRMSG)	*INQ
Message Queue	(MSGQ)	QSYSOPR
Library		*LIBL
Text 'description'	(TEXT)	i.e. 1230T prt Remote on 5394

Press ENTER

☞ ***On AS/400, if the ASF has been installed on the printer and Feed item is selected to F4, FORM FEED parameter needs to be*AUTOCUT. If printer Feed item is selected to F1, F2 or F3, FORM FEED parameter needs to be * CONT. If both FORM FEED and Feed item do not match, an error 14 (invalid device selection) is to be expected on the printer.***

`Help` is always available.

To do so:

press F13 (How to use this display)
press F11 (Search index)
key in CRTDEVPRT press ENTER
key in 5 next to the topic (display topic) and press ENTER
you can then scroll up and down to get the info you need to
leave Help, press F3 (exit Help)

☞ ***5294 remote controller must have extended function #3601. IPDS printers are not supported by 5251-12 remote controller***

Glossary

ASCII

American Standard Code for Information Interchange. A standard code used to represent characters in 8-bit code to allow communication between the computer and another type of device.

AUTOMATIC SHEET FEEDER (ASF)

Equipment that automatically loads single sheets into the printer.

BAUD RATE

Baude rate is the rate at which information is transferred between the computer and the printer. Baud is a unit of transmission speed based upon the number of signals per second. The computer and the printer must be configured at the same baud rate for the communication to function correctly.

BIDIRECTIONAL PRINTING

The print head moves from left to right on one line and from right to left on the next line. In this way, the speed of printing is optimized.

BIT

Contraction of binary digit. A bit represents "0" or "1" (off or on) and it is the smallest unit of digital information used by the computer or any peripheral device.

BPS

Abbreviation for bit per second.

BUFFER

An area of memory in the computer or printer where the data is stored until it can be processed.

BYTE

A byte represents a unit of information consisting of eight bits.

CARRIAGE RETURN

A control code which causes the printer carriage to be moved to its leftmost position.

CHARACTER SET

A set containing related characters. A set, for example, may be composed of math symbols, or characters in foreign language and so on.

COMPRESSED

Printing is considered compressed when the horizontal spacing is set to 16.7 or 17.1 cpi (characters per inch).

CONTROL CODE

A given instruction that will cause the printer to perform a certain function.

CPI

Characters per inch. This is a unit to measure horizontal spacing.

CPS

Characters per second. This is a unit used to measure the rate of printing.

DATA PROCESSING TEXT

A type of medium speed printing which creates a better readability of the text.

DEFAULT

A value which has been set to be active at the time the printer is turned on.

DOT GRAPHICS

A drawing created by dot matrix.

DOT MATRIX

Printing method in which groups of dots are used to compose symbols.

DOUBLE STRIKE

Printing attribute. The character is printed twice in the same position.

DOUBLE WIDTH

Printing attribute. The character is printed within a double space. It is also called enlarged.

DOWN-LINE LOADING

A method to define new characters through the use of specific commands which are sent to the device (printer).

DOUBLE STRIKE

Printing attribute. The character is printed twice in the same position.

DOUBLE WIDTH

Printing attribute. The character is printed within a double space. It is also called enlarged.

DOWN-LINE LOADING

A method to define new through the use of specific commands which are sent to the device.

DPI

Dots per inch. This is the unit of measurement used for dot graphics.

DRAFT PRINTING

A type of medium speed printing which creates a better readability of the text.

DRAFT TEXT PRINTING

A type of high speed printing.

EMPHASIZED

Printing attribute. The character is printed twice with the smallest possible displacement between positions.

ESCAPE SEQUENCE

A sequence of control characters that starts with the ESC code and are used to call up certain attributes of the printer such as double strike.

FANFOLD PAPER

A type of paper which is perforated and which has vertical strips with sprocket holes.

FONT

A set of characters with a given size and style.

FORM FEED

Control code and function key on the operator panel.

HARDWARE

The physical equipment.

HEX DUMP

A procedure that prints the data stored in the printer buffer in hexadecimal codes.

HEXADECIMAL

The numbers are represented to the base 16. The digits range from 0 to 9 and then from A to F. The hexadecimal codes are used in programming because they are compact.

HORIZONTAL SPACING

Horizontal spacing is the spacing reserved for each character There are two types of spacing: fixed and proportional. With fixed spacing the amount of space available for the characters will remain the same during the printing session. There is a wide range of measuremants available for horizontal spacing: 10, 12, 15, 16.7, 17.1 cpi (characters per inch). With proportional spacing, the space assigned to the character varies according to the character width.

INTERFACE

With regard to hardware: interface refers to the connection, i.e. the board between the host and the printer. With regard to software:interface refers to the standards which are set relating to the communication between the host and the printer.

ITALICS

Printing attibute. The characters shapes are slanted.

LINE FEED

Control code and function key that will cause the printer to advance to the next line.

LPI

Lines per inch.

MEMORY

The printer, like the computer has a memory. When you want to print a file, the information will be quickly sent to the printer's memory and from there it will be printed onto paper.

NEEDLES

They are an essential part of the print head which causes a particular dot group to be printed on the paper to represent a graphics symbol character.

NLQ PRINTING

Near Letter Quality printing. A type of reduced speed printing. Quality is quite high due to the increased number of dots which make up each character.

OPERATOR PANEL

With the indicators, function keys (which could be buttons or touch-sensitive buttons) and display, the user can control the operation of the printer.

PAGE FORMATTING

A parameter which allows the information to be correctly arranged on the page. Using this parameter, you can set the top, bottom, left and right margins, the page length, the horizontal and vertical spacings and so on.

PAPER BAIL

The bar that holds the paper against the platen.

PAPER FEED TRACTORS

The tractor unit is a mechanism which allows the fanfold paper to be fed.

PAPER JAM SENSOR

This sensor is used to detect the correct movement of fanfold paper. It checks the sequential passage of the paper holes.

PAPER LOAD LEVER

Used to load paper. After turning the printer on, the user feeds the paper by pulling the lever. When the paper has been correctly positioned, the user releases the lever.

PAPER OUT SENSOR

This sensor will send a signal when there is no more paper. This will cause the printer to stop printing.

PAPER THICKNESS LEVER

Used to adjust the distance between print head and platen such that the user can load different types of paper into the printer (for example multipart form).

POWER CABLE

This is the cable which effects the connection between the printer and the main power supply.

PRINT HEAD

The mechanism that moves horizontally along the carriage bar and executes the printing.

PROPORTIONAL PRINTING

This type of printing will assign a space to the character such that it is proportional to the character width.

RAM

Random Access Memory.

ROM

Read Only Memory.

SINGLE SHEET

This is the type of paper that must be loaded into the printer one sheet at a time. You can handle large quantities of single sheets using the Automatic Sheet Feeder.

SOFTWARE

The set of instructions which are sent to the printer to perform certain functions.

VERTICAL SPACING

It is the distance between two lines.

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